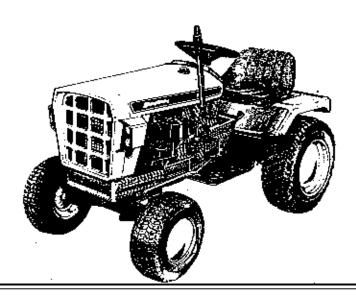
# Simplicity



# HYDROSTATIC DRIVE

RIDING TRACTORS

SOVEREIGN MFG. NO. 759 3415H

LANDLORD MFG. NO. 757 3410H

SIMPLICITY MANUFACTURING COMPANY, INC.



SER. FORM-OP1

#### TO THE OWNER

Congratulations on your purchase of the Simplicity tractor. It has been designed with emphasis on the ability to do your most important jobs quickly and efficiently with the least operator effort.

So that you can get the very most from your purchase, you and anyone else who may operate the tractor should study this manual and the owners manual for your attachments before using your Simplicity tractor. Throughout the manual, we will refer to directions as left, right, front, and rear. These directions are as the operator sits on the tractor seat in the driving position.

For your own safety and that of your family and others, periodically review the safety tips found in this manual. You will find the table of contents very useful in referring to this manual when questions arise in the future. We have provided you with information to perform most service jobs quickly and easily, but your Simplicity dealer will be happy to help you with any service or repair work.

When ordering replacement parts for your Simplicity tractor, be prepared to give your dealer the identification numbers found on the tractor and engine identification plates shown below. The identification plate for the tractor is located on the frame in front of the tractor seat. The one for the engine is located on the left side of the engine blower housing. We suggest that you locate the numbers and record them below for easy reference.



MODEL TYPE CODE

TATUL MATHEMATICAL MATHEMAT

TRACTOR IDENTIFICATION PLATE

**ENGINE IDENTIFICATION PLATE** 

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## SAFETY PRECAUTIONS TO PROTECT YOURSELF AND OTHERS

#### OPERATION

Know the controls and how to stop quickly - READ THE OWNER'S MANUAL.

Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction.

Do not carry passengers, KEEP CHILDREN AND PETS A SAFE DISTANCE AWAY.

Clear work area of objects which might be picked up and thrown.

Take all possible precautions when leaving vehicle unattended; such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.

Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.

Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.

Stay alert for holes in terrain and other hidden bazards.

Use care when pulling loads or using heavy equipment.

A. Use only approved drawbar hitch points.

B. Limit loads to those you can safely control.

C. Do not turn sharply. Use care when backing.

D. Use counterweight (s) or wheel weights when suggested in owner's manual.

Watch out for traffic when crossing or near roadways.

Keep all nuts, bolts, and screws tight to be sure equipment is in safe working condition.

Do not alter basic engine governor settings or overspeed engine.

To not operate equipment when barefoot or wearing open and als. Always wear substantial footwear.

#### FUEL AND FIRE HAZARDS

Handle gasoline with care - it is highly flammable.

A. Use approved gasoline container.

B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline C. Open doors if engine is run in garage - exhaust furnes are dangerous. Do not run engine indoors.

Never store equipment with gasoline in the tank inside a building where furnes may reach an open flame or spark.

Allow engine to cool before storing in any enclosure.

To reduce fire hazard keep engine free of grass, leaves or excessive grease.

#### ATTACHMENTS

Disengage all attachment clutches and shift into neutral before attempting to start engine.

Disengage power to attachments and stop engine before leaving operator position.

Disengage power to attachment (s) and stop engine before making any repairs or adjustments.

Disengage power to attachments when transporting or not in use.

When using any attachments never direct discharge of material toward bystanders or allow anyone near vehicle while in operation.

Keep vehicle and attachments in good operating condition and keep safety devices in place. Use guards as instructed in owner's manual.

Vehicle and attachments should be stopped and inspected for damage after striking a foreign object and the damage should be repaired before restarting and operating the equipment.

When using vehicle with mower:

(1) Mow only in daylight or in good artificial light.
(2) Never make a cutting height adjustment while.

(2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
 (3) Shut engine off when unclogging chute.

(4) Check blade mounting bolts for proper tightness at frequent intervals.

Stop blades when crossing gravel drives, walks or roads.

If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.

#### SIMPLICITY'S NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (45 days for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE. The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and, in no event shall the Company, be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

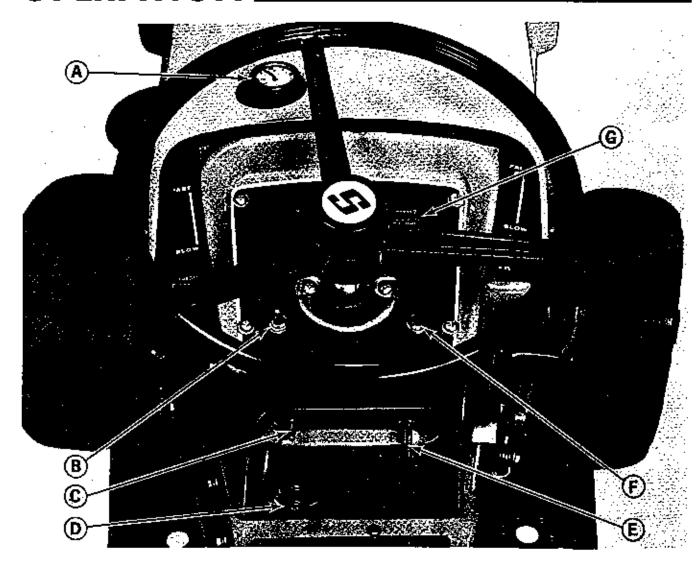


Figure 1. Tractor instrument panel as seen from the operators position on tractor seat.

# INSTRUMENTS AND CONTROLS-HOW TO UNDERSTAND AND USE THEM

Picture yourself seated on your Landlord or Sovereign tractor. Before starting the engine, lets learn how to understand and use the instruments and controls. The paragraphs referring to the instruments and controls are illustrated on figures 1 through 5.

IGNITION SWITCH: (Figure 1, item E) To actuate the ignition switch first insert the ignition key as shown. When the key is turned clockwise to the first position, the ignition is ON. In the ON position the lights, hourmeter, etc. will operate. Turn the key clockwise past the ON position to the START position to actuate the starter. THE HYDROSTATIC TRANSMISSION CONTROL LEVER MUST BE IN THE NEUTRAL POSITION AND THE POWER TAKE OFF CLUTCH CONTROL LEVER MUST BE IN THE DISENGAGED POSITION BEFORE THE STARTER WILL ACTUATE. Release the key as soon as the engine starts. Return

the key to the vertical position to stop the engine. CAU-TION: ALWAYS REMOVE THE IGNITION KEY WHEN CLEANING, ADJUSTING, OR SERVICING THE TRAC-TOR OR ANY ATTACHMENT OR WHEN LEAVING THE VEHICLE UNATTENDED.

CHOKE CONTROL KNOB: (Figure 1, item D) The choke control knob may be pulled out to increase the amount of fuel entering the engine for starting and cold weather warmup. When starting a cold engine in cold weather pull the choke all the way out. Some choke may be required to start the engine when the air temperature is above 70 degrees F or while the engine is still warm from being recently run. After the engine has started, push the choke in slowly. In cold weather it may be necessary to leave the choke pulled out slightly for three or four minutes while the engine warms up. NEVER OPERATE THE ENGINE WITH THE CHOKE OUT AFTER IT HAS HAD SUFFICIENT TIME TO WARM UP - ABOUT 5 MINUTES SHOULD BE SUFFICIENT EVEN IN COLD WEATHER.

GENERATOR WARNING LIGHT: (Figure 1, item F) The generator light will warn you if the generator or voltage regulator on your tractor is not functioning properly. It is normal for the generator light to come on when the ignition switch is in the ON position and the engine is stopped or running at low speed. The light should go out when the engine is running at high speeds. If it does not the generator or voltage regulator is not functioning properly. Check the generator belt adjustment as described on page 14. See your Simplicity dealer if the light will not go out after the belt is adjusted.

HOURMETER: (OPTIDNAL) - (Figure 1, item G) The hourmeter is designed to record the number of hours the engine runs. However, since it is electrically operated, it will run any time the ignition switch is in the ON position even though the engine may not be running. The hourmeter is useful in keeping accurate maintenance records, and also a convenient way of telling how much time the tractor has been used on a particular job.

FUEL GAUGE AND FILLER CAP: (Figure 1, item A) The fuel gauge indicates the amount of fuel in the tank. Before adding fuel, shut off the engine and allow it to cool. To remove the fuel gauge and filler cap for adding gasoline, turn the fuel filler gauge-cap counter-clockwise. The fuel tank holds approximately 3 gallons - enough for about 3 hours of mowing. Use leaded or non-leaded "regular" grade automotive gasoline. CAUTION: DO NOT ALLOW LIGHT-ED CIGARETTES, MATCHES, ETC., AROUND ANY OPEN GASOLINE CONTAINER. DO NOT OVER FILL; WIPE UP ANY SPILLED GASOLINE.

LIGHT SWITCH: (Standard equipment on Sovereign; Optional on Landlord) (Figure 1, item C) The switch should be moved up to the ON position to turn on the tractor lights. To prevent the lights from being turned on by unauthorized persons, the ignition switch must also be in the ON position for the lights to operate. To turn the lights off, push the light switch down to the OFF position. DO NOT OPERATE THE LIGHTS FOR LONG PERIODS OF TIME (MORE THAN 20 MINUTES) WHEN THE GENERATOR LIGHT IS ON OR THE BATTERY MAY DISCHARGE ENOUGH SO IT WILL NOT START THE ENGINE.

POWER LIFT SWITCH: (OPTIONAL) (Figure 1, item B) The power lift switch controls the electrically operated power lift unit. Push the toggle switch forward when you wish to raise a front center or rear mounted attachment. Pull it back toward you to lower the attachments. The power lift will stop and hold in any position when you release the toggle switch. The height indicator (Figure 7, item A) on the left side of the tractor can be used to determine what position the lift is in. The lift motor will ratchet when it has reached the end of its travel. Ratcheting is not harmful to the unit, but you should release the toggle switch as soon as ratcheting begins to prevent unnecessary wear. If the motor is allowed to ratchet for an extended period of time, a circuit breaker will open, disconnecting power to the lift motor. It will automatically reset after about a minute.

CLUTCH AND BRAKE PEDAL: (Figure 2, item A) Depressing the pedal will first disengage the tractor drive clutch. As you continue to depress the pedal, the brakes will



Figure 2. Controls on right side of tractor

be applied to stop the tractor. CAUTION: THE BRAKES WILL NOT FUNCTION IF THE GEAR SHIFT LEVER (Figure 5, item A) at the rear of the tractor is in the neutral position.

HYDROSTATIC TRANSMISSION CONTROL LEVER: (Figure 2, item B) The Hydrostatic transmission control lever regulates the direction and amount of oil (fluid) pumped by the hydrostatic transmission pump to drive the tractor, and is used to control both the direction of travel and the ground speed of the tractor. NEUTRAL position for the hydrostatic transmission control lever is as shown with the back of the control lever resting against the notched portion of the guide. The hydrostatic transmission control lever must be in this neutral position for the engine starter to operate.

To move the tractor FORWARD grip the control lever squeezing the lock release lever toward the knob and move the control lever forward. The gear shift lever (Figure 5, item A) must also be in the drive position for the tractor to operate. The farther forward from neutral the control lever is pushed, the faster the tractor will move forward at a given engine speed. To slow or stop the tractor when it is moving forward, squeeze the lock release lever toward the knob and pull the control lever rearward slowly toward the neutral position. You can place the hydrostatic transmission in neutral from the forward position without watching it by slightly pushing to the right on the control lever as it is moved rearward. The control lever will stop against the notched portion of the guide when it reaches neutral.

To move the tractor in REVERSE, squeeze the trigger of the hydrostatic control lever toward the knob, push the lever to the left, and pull it back from the neutral position. The farther back the control lever is moved, the faster the tractor will travel in REVERSE. To stop the tractor in reverse, squeeze the trigger toward the knob and move it slowly to the neutral position. In emergency situations, you may use the clutch and brake pedal (Figure 2, item A) to stop.

PARKING BRAKE LOCK: (Figure 2, item C) To lock the parking brake grasp the lock, and pull it upward and back until the handle rests against the foot rest as shown in figure 2. To release pull the top portion away from the foot rest and down. It should be locked in the up position to prevent the tractor from rolling whenever the operator leaves the tractor seat.

SPEED CONTROL LEVER: (Figure 3, item A) The engine speed control lever is used to set the desired engine speed. The speed control lever should be moved forward away from the operator to increase engine speed or back toward the operator to reduce engine speed. Consult the appropriate section of this manual for specific information on suggested settings of the engine speed control lever. For example: starting the engine, page 5. Controlling tractor ground speed page 8, and the Operation Chart on page 8.

POWER TAKE OFF CONTROL LEVER: (Figure 3, item B) This power take off lever controls power to center or rear mounted attachments such as a mower or rotary tiller which are driven by the power take off. Pull the lever up and move it forward until it snaps over center to engage the power take off. Pull it back and down to disengage. The tractor engine should be running at 1/2 to full engine speed when the power take off is engaged to absorb the added load. CAUTION: ALWAYS DISENGAGE THE POWER TAKE OFF, AND WAIT UNTIL ALL ATTACHMENTS HAVE STOPPED MOVING BEFORE LEAVING THE TRACTOR SEAT. THE POWER TAKE OFF CONTROL LEVER MUST BE DISENGAGED BEFORE THE ENGINE WILL START.

MANUAL LIFT LEVER: (Figure 3, item C) The lift lever is used for lifting mounted attachments, such as the rotary mower, or the tiller out of the operating position so



Figure 3. Controls on left side of tractor.

they can be transported. You can also regulate the operating height of attachments, such as the grader blade, and snow thrower, by using the notches and pin holes provided. The thumb button (D) on top of the handle is provided to disengage the catch from the quadrant so the lever can be moved forward or back as desired and locked into position. See the owners manual for any attachment you may be using with the tractor for specific information on how the lift lever should be used.

DUAL LIFT LEVER: (OPTIONAL) (Figure 4, item A) The dual lift lever provides a convenient means of operating a front mounted attachment such as a snow thrower or a snow plow and dozer blade independently of center or rear mounted attachments. A good example is if you wish to use the rotary tiller and the snow plow and dozer blade in preparing a seed bed. Both attachments can be mounted to the tractor at the same time, and the operator can conveniently raise or lower each of them from the tractor seat.

GEAR SHIFT LEVER: (Figure 5, item A) The gear shift lever located at the rear of tractors equipped with the hydrostatic transmission is used to disengage the transmission from the rear axle. With the lever in the NEUTRAL position, the tractor may be moved without engine power. CAUTION: WHEN THE GEAR SHIFT LEVER IS MOVED TO THE NEUTRAL POSITION THE BRAKES WILL NOT FUNCTION. NEVER DISENGAGE THE SHIFT LEVER IF TRACTOR IS ON AN INCLINE UNLESS THE TIRES ARE PROPERLY BLOCKED, BE SURE THE TRACTOR ENGINE IS STOPPED BEFORE ATTEMPTING TO EN-GAGE OR DISENGAGE THE GEAR SHIFT LEVER. To engage, move the lever to the vertical position, as shown in Figure 5 until it snaps into the spring clip. Disengage the shift lever by raising the spring lock up and pushing the shift lever to the right as shown in figure 30.

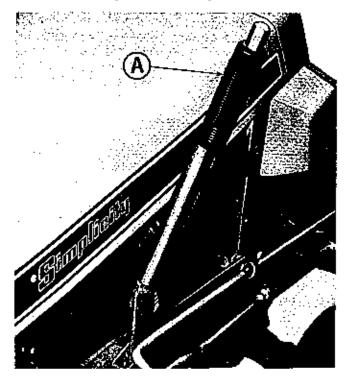


Figure 4. Dual lift lever.

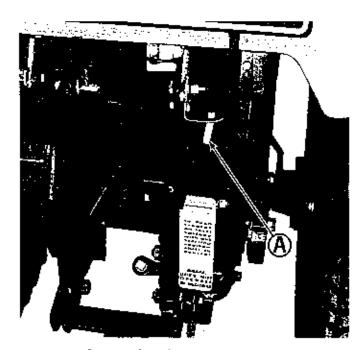


Figure 5. Gear shift disconnect lever.

#### BEFORE OPERATING THE TRACTOR

Though your Simplicity dealer may have performed the before starting checks listed below, we suggest that you personally check each one so that you will become familiar with them and also to insure that your tractor is ready to operate the first time you use it.

TIRE INFLATION: The tires should be checked and inflated to the proper pressure before operating. Front tires should have 12 to 15 PSI of air and rear tires 6 to 8 PSI of air.

CRANKCASE OIL: Before starting the engine, insure the engine crankcase is filled with the correct grade and weight of oil. See page 15 in the maintenance section of this manual for instructions on checking the oil and the correct oil to use.

FUEL SUPPLY: Fill the fuel tank completely with clean fresh leaded or non-leaded regular grade automotive gasoline. (Do not mix oil with gasoline). Premium gasolines are not recommended as they increase carbon deposits in the engine. CAUTION: GASOLINE IS HIGHLY FLAMMABLE. NEVER ALLOW ARTICLES SUCH AS LIGHTED MATCHES, OR CIGARETTES, WHICH COULD CAUSE IT TO IGNITE NEAR OPEN GASOLINE CONTAINERS. DO NOT OVERFILL. WIPE UP ANY SPILLED FUEL. BE SURE THE ENGINE IS NOT RUNNING AND HAS BEEN ALLOWED TO COOL BEFORE ADDING FUEL.

TRANSMISSION: The transmission oil (fluid) level should be checked and the transmission filled with Dexron Automotive Transmission Oil to the oil level plug. (Figure 31, item A).

TRANSFER GEAR CASE OIL: See figure 31. Remove the pipe plug (D) from the elbow at the rear of the gear case. Oil should be present at the bottom of the filler

elbow. If it is not, add 90 weight transmission oil until it is visible in the bottom of the elbow.

AIR CLEANER: Insure that the air cleaner is in place and properly sealed. If it is dirty, clean or replace it according to the instructions on page 17, in the Maintenance section of this manual.

BATTERY: Check the battery to be sure it is filled to the proper level with electrolyte and the vent holes in each of the filler caps are open. See page 19 in the Maintenance section of this manual.

AXLE HOUSING OIL: See figure 30. Remove the pipe plug (A) to check the oil. The oil should be level with the top of the elbow. If it is not, add 90 weight transmission oil until it is level with the top of the elbow.

LUBRICATION: Lubricate all grease Zerks and pivot points according to the every 25 hour maintenance instructions on page 17 of this manual. A pisto-luber grease gun specially designed for this purpose is available from your Simplicity dealer.

ATTACHMENTS: Read and become familiar with the Attachments Manual for any attachments you are using with your tractor.

SEAT ADJUSTMENTS: The seat should be adjusted to the operator can comfortably depress the clutch and brake pedal while sitting back in the seat. See page 10 in the Adjustment section of this manual if the seat requires adjusting.

#### STARTING THE ENGINE

- Refer to the Instruments and Controls section beginning on page 2 of this manual for the location and the use of instruments and controls. CAUTION: IT IS DANGEROUS TO START THE TRACTOR UNLESS YOU ARE SEATED IN THE TRACTOR SEAT. Insure that the power take off clutch control lever is in the disengaged position, and the hydrostatic transmission control lever is in the neutral position.
- Move the engine speed control lever to midway between slow and fast.
- Pull the choke knob out. In cold weather pull it all the way out. In warmer weather or when starting an engine which is still warm from recent operation less choke will be required.
- 4. Depress the clutch brake pedal and hold it down to disengage the transmission drive. Although the engine may be started without disengaging the clutch, in cold weather it will start easier with the clutch disengaged since the starting motor will not have to turn the transmission in addition to the engine. Also depressing the clutch brake pedal provides additional safety in starting as the tractor can not move forward or backward unexpectedly when the engine starts. 5. Insert the ignition key and turn it to the right past the ON position to the START position to engage the starter motor. As you turn the key, check the Generator warning light to see that it is functioning properly.
- 6. When the engine starts, release the key and allow it to return to the ON position. Slowly push the choke in. After the engine has run for a few minutes it should not require

any choking. If the engine does not start after about 10 seconds of cranking it may be receiving too rich a fuel mixture. Push the choke in and try again. The engine may not need to be choked when starting it in warm weather or if it has been operated recently.

7. Release the clutch-brake pedal as soon as the engine is running smoothly.

#### STOPPING THE ENGINE

- 1. Move the engine speed control lever to the SLOW position.
- 2. If the tractor has been operating under full load, allow the engine to idle for about a minute to reduce the engine temperature. Stopping a hot engine too suddenly can damage engine parts.
- Turn the ignition key counter-clockwise to the vertical position to stop the engine.
- 4. Set the parking brake.
- Remove the ignition key to prevent unauthorized use of the tractor.

#### CONTROLLING TRACTOR GROUND SPEED

Tractor ground speed can be controlled by the position of the hydrostatic transmission control lever and/or the engine speed control lever.

#### **ENGINE SPEED**

Most power take off driven attachments operate best at a particular speed. Since the speed of the power take off drive is directly related to the engine speed it is desirable to adjust the engine speed to control attachment speed and use the hydrostatic lever to control ground speed. For pulling light loads or transporting the tractor and attachments from one area to another, adjusting the engine speed is one method of controlling tractor ground speed.

#### HYDROSTATIC TRANSMISSION CONTROL

The hydrostatic equipped tractor is designed so that forward and reverse movement can be completely controlled without the use of the clutch. Simply squeeze the control handle and move it forward to start the tractor moving ahead. To slow the tractor move the control to the rear. As the control is moved further away from neutral the tractor ground speed will increase. The clutch and brake pedal may be depressed to stop the tractor at any time. It is very handy to use the clutch to slow down for turns or when mowing in confined areas when both hands are needed for steering.

#### STARTING TRACTOR TRAVEL

Assure yourself that the area in which you are going to drive the tractor is free of obstructions. Release the parking brake and look around to insure there are no obstructions in your path. To start the tractor in motion, squeeze the trigger of the hydrostatic control lever with your right hand, and move it forward or back from the neutral position slowly until you have reached the desired speed. Always move the hydrostatic control lever slowly to prevent abrupt and dangerous speed changes. CAUTION: DO NOT STOP OR START SUDDENLY WHEN GOING UP OR DOWN HILL. MOW UP AND DOWN THE FACE OF STEEP SLOPES; NEVER ACROSS THE FACE. REDUCE SPEED ON SLOPES AND IN SHARP

TURNS TO PREVENT TIPPING OR LOSS OF CONTROL. EXERCISE EXTREME CAUTION WHEN CHANGING DI-RECTION ON SLOPES.

#### STOPPING TRACTOR TRAVEL

To stop the tractor squeeze the trigger toward the hydrostatic transmission control lever and move the lever slowly toward the NEUTRAL position. In emergencies or if both hands are required on the steering wheel, you may depress the clutch and brake pedal to stop the tractor. Before leaving the tractor seat, shut off the engine, set the parking brake, and remove the ignition key.

#### HOT WEATHER OPERATION

When operating the tractor at temperatures above 75°F pay particular attention to the following items to prevent damage.

- I. Keep the engine cooling fins clean and free of obstruction which would decrease air flow to and from the engine. See page 15 for cleaning instructions.
- 2. Keep the transmission oil (fluid) cooler clean and free of dirt and chaff which would restrict air flow. Also keep the cooler free of oil. An oil film on the outside of the cooler greatly reduces its cooling ability. See page 15 for instructions on cleaning the oil cooler.
- 3. Insure that you are using the proper grade and weight of oil in the engine for the temperature where the tractor is being used. Check the oil level each time you fill the fuel tank. DO NOT OVERFILL THE CRANKCASE ENGINE OVERHEATING MAY RESULT.
- 4. Check the battery water level more frequently than every 25 hours which is recommended under normal conditions. High temperatures cause faster evaporation of water from the battery.
- 5. Remove the carburetor heat deflector used with the snow thrower or dozer blade.

#### COLD WEATHER OPERATION

When the tractor is being used in temperatures below 30°F, check the following items closely:

- 1. Use the correct grade and weight of oil for the temperature conditions. Change the oil only when the engine is warm. If an unexpected temperature drop occurs when the engine is filled with summer oil, before starting the engine, move the tractor to a warm location until the oil will flow freely.
- 2. Use fresh fuel. Fill the fuel tank after each days use to protect against moisture condensation.
- 3. Disengage the clutch when starting the engine.
- Install the heat deflector furnished with the snow thrower or dozer blade if these attachments are to be used.

#### DUSTY OPERATING CONDITIONS

When the tractor is operated in dusty or dirty conditions check the following items closely:

- Keep the engine and transmission oil cooler fins clean and free of materials which will decrease air flow.
- Service the air cleaner more frequently. Clean or replace it as often as necessary to allow air to flow to the carburetor freely.
- 3. Change the engine oil more frequently. The oil should be

changed more often than every 25 hours as is recommended under normal conditions. In extremely dusty conditions, change every 10 operating hours.

### OUT OF SERVICE PROTECTION (Storage)

When the tractor is to be stored without use for a month or longer, the following precautions should be taken to insure your tractor will be ready to go when you need it:

- 1. Unless you wish to run the tractor until the fuel tank is empty, add a good brand of gasoline stabilizer. This additive, Stabil, available from your Simplicity dealer, prevents formation of gum and varnish for up to one year, providing easier starting and a cleaner fuel system.
- 2. Drain and refill the engine crankcase while the engine is warm. Tie a tag on the tractor indicating what grade and weight of oil was used.
- Remove the spark plug and pour one ounce (two tablespoons) of SAE 30 engine oil into the cylinder. Engage the starter to turn the engine over a few times, then reinstall the spark plug.
- 4. Clean the air cleaner element as described on page 19, of the Maintenance instructions.

- 5. Plug the exhaust outlet to prevent the entrance of moisture, dirt, bugs, etc.
- 6. Insure the battery is filled to the proper level with water and is fully charged. Battery life will be increased if it is removed and put in a cool dry place and fully charged about once a month.
- 7. Grease all grease Zerks and put oil on the lubrication points shown in the Maintenance section.
- 8. If the tractor is to be stored 6 months or longer block the tractor up off the wheels to relieve weight and keep the tires off a damp floor. Protect the tires from prolonged exposure to direct stunlight.
- 9. Store the tractor in a dry place indoors.

#### STARTING THE TRACTOR AFTER STORAGE

Before starting the tractor after it has been stored, do the following:

- 1. Remove the blocks from under the tractor.
- 2. Replace the battery.
- Unplug the exhaust outlet.
- 4. Perform the "Before Operating the Tractor" instructions found on page 5 of this manual.

	Engine Speed	Hydrostatic	Approx. Ground Speed	Required Accessories	Recommended Accessories and Options
Attachment	Control	Lever Position	(MPH)	and Options	and Options
Transporting Tractor	s F	R F	3.7		
42" or 48" Rotary Mower (Smooth turnain - normal grass)	s F	R S	3-5		2 Rear wheel weights when mowing slopes 20-40% mowing slopes greater than 40% not recommended.
42" or 48" Rotary Mower (Rough terrain heavy or wot grass)	s F	N S	2-4		2 Rear wheel weights when mowing slopes 20-40% mowing slopes greater than 40% not recommended.
46" Sickle Bar	s PF	R S	3-5		2 Rear wheel weights when mowing slopes 20-40% mowing slopes greater than 40% not recommended.
38" Lawn Revital- izer	s P <sub>F</sub>	N C	3-5	Rear lift kit.	Power lift kit.
36" or 42" Snow Thrower (Light Snow)	s	N Q	3-4		Power lift kit. Tire chains. 4 Rear wheel weights. 2 Front wheel weights.
36" or 42" Snow Thrower (Heavy or wet snow)	s F	R F	1-2		Power lift kit. Tire chains. 4 Rear wheel weights. 2 Front wheel weights.
42" or 46" Snow Plow and Dozer Blade	s	N O	3.5		Tire chains. 4 Rear wheel weights. 2 Front wheel weights. Power lift kit.
42" Grader Blade	s 2.	R P	3.5		4 Rear wheel weights.
36" Rotary Tiller	s S	N 9 2	1-2	Rear lift kit.	4 Rear wheel weights. 2 Front wheel weights. Power lift kit.
10" Mounted Plow	s F	N S	2-3	Rear lift kit.	4 Rear wheel weights. 2 Front wheel weights. Power lift kit.
Cultivator	s V	N P	2-4	Rear lift kit.	4 Rear wheel weights, 2 Front wheel weights. Power lift Kit.
Spring Tooth Harrow	s	NQ R	3-5	Rear lift kit.	4 Rear wheel weights. 2 Front wheel weights. Power lift kit.

REFER TO YOUR ATTACHMENT OWNERS MANUALS FOR ADDITIONAL INFORMATION.

Figure 6. Operation Chart

# TROUBLE SHOOTING GUIDE

PROBLEM OR SYMPTOM	POSSIBLE CAUSES	CHECKS AND CORRECTIONS
Starter will not turn engine over.	Hydrostatic control lever not in neutral position.	Move hydrostatic control lever to neutral.
	Power take off control lever not in disengaged position.	Move control lever to disengage position.
·	Battery discharged or dead.	Check the battery-charge or replace as necessary.
	Protective circuit breaker tripped. Neutral safety start switches not properly adjusted. Wiring loose or broken.	Wait 1 minute for circuit breaker to reset.  Adjust the safety switches for power take off and transmission. See pages 12 & 13.  Visually check wiring, replace any broken or
Engine turns will not at a		trayed wires, tighten loose connections.
Engine turns will not start.	Out of fuel, Engine flooded. Crankcase oil too heavy. Fuel filter plugged, Water in gasoline. Spark plugs worn or dirty.	Fill fuel tank. Push choke in, attempt to start. Change oil as recommended on page 16. Replace fuel filter. See page 19. Drain fuel tank, replace fuel filter. Check and replace or set. See page 20.
Engine starts hard or runs poorly.	Fuel mixture too rich, Spark plugs worn or dirty,	Push choke in. Clean air filter element. See page 19. Check and replace or set. See page 20.
Engine knocks.	Not enough oil in crankcase.	Add oil as required. See page 15.
	Using wrong weight of ail. Using wrong grade of gasoline.	Change oil, use weight recommended for weather conditions. See page 16. Use regular grade automotive gasoline.
Tractor drive clutch will not disengage.	Too much clutch free travel.	Adjust clutch pedal free travel. See page 11.
Engine will not idle smoothly.	Air cleaner dirty, Water în fuel tank, Carburetor idle mixture set incorrectly,	Clean or replace air cleaner. See page 19. Remove fuel tank to drain, replace fuel filter, Set idle mixture. See page 14.
F	Plugs worn or not set properly.	Adjust or replace. See page 20.
Excessive oil consumption.	Engine running too hot. Using wrong weight of oil. Too much oil in crankcase.	Clean engine fins. See page 15. Change to correct weight oil. See page 16. Check oil level according to instructions on page 15.
Exhaust is black or smokey.	Air filter element dirty. Fuel mixture too rich.	Clean or replace filter element.  Be sure choke opens fully when it is pushed way in. Set carburetor idle adjustment.  See page 14.
Engine runs, tractor will not drive with full power.	Shift lever in neutral. Parking brake ON. Transmission oil cold. Transmission low on oil. Main.Drive belt slipping.	Move shift lever to drive. See figure 5. Release parking brake. Allow 5-10 minutes to warm up. Add transmission fluid. See page 18. Adjust clutch free travel. See page 11.
Tractor creeps forward or back w/hydrostatic control in Neutral.	Hydrostatic control out of adjustment.	Adjust hydrostatic neutral setting, See page 11.
Brake will not hold.	Brakes need adjusting. Worn brake lining.	Adjust brake linkage. See page 12. Have your Simplicity dealer replace lining.
Tractor drive clotch will not engage,	Too little clutch free travel.	Adjust clutch free travel. See page 11.
Tractor handles poorly.	Steering linkage or front axle loose. Tires not properly inflated.	Tighten any loose connections. Inflate tires correctly. Six to eight pounds in rear and 12-15 pounds in front.
	Wheels are spinning or slipping.	Use weights to provide additional stability and traction.
Power lift will not operate.	Moving too fast on sloping surfaces,	Reduce speed.
	Ignition switch may not be on, Circuit breaker may have cut out.	Furn ignition switch on, Wait about a minute for circuit breaker to reset.
Drive belt slips.	Belt stretched or worn, Pulleys may be greasy or oily, Too little clutch free travel.	Replace with correct Simplicity belt. Clean with non-flammable solvent, Adjust free travel. See page 11.

# ADJUSTMENTS\_

Most of the adjustments described here are easy to perform. Some of the adjustments require a little mechanical knowhow and some special tools to do them well. You may wish to have your Simplicity dealer make some or all of the adjustments as they are required; however, we have given instructions for them here as a convenience to you should you wish to make them yourself. CAUTION: DO NOT ATTEMPT TO MAKE ANY ADJUSTMENTS WHILE THE ENGINE IS RUNNING UNLESS REQUIRED IN THE INSTRUCTIONS. IF THE ENGINE MUST BE RUNNING TO MAKE AN ADJUSTMENT, BE CAREFUL TO STAY CLEAR OF ANY MOVING PARTS.

The Landlord and Sovereign tractors have been designed for easy accessibility to the areas which need to be reached in making adjustments and performing maintenance. The underside of the frame is open to provide easy access to areas requiring lubrication, adjustment, or repair.

#### RAISING THE TRACTOR HOOD

See figure 7. The tractor hood is hinged at the front by two spring loaded bolts. It may be easily opened by releasing the two rubber straps (B) located on either side of the bood. Pull down and out on the straps to release them. See figure 8. Lift upward on the back of the hood to raise it as shown. The hood raised in this position provides easy access to the generator, battery, fuel tank, engine, etc.

#### RAISING THE SEAT DECK

See figure 9. The tractor seat deck (A) is hinged at the back. To raise the seat deck, reach under it from each side and pull the two locking levers (B) to the outside. As you hold the

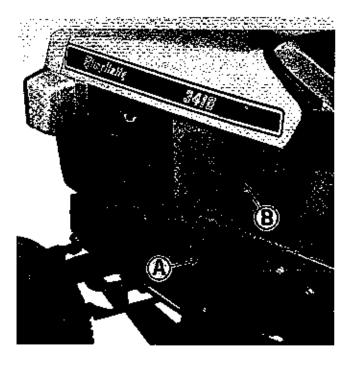


Figure 7. Left side of tractor.

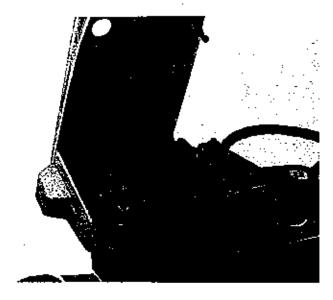


Figure 8. Tractor hood raised for easy access.

looks out raise the seat deck as shown in figure 10. Raising the seat deck in this manner will expose many of the transmission adjustment and maintenance areas.

#### SEAT ADJUSTMENT

See figure 10. The tractor seat is properly adjusted when the operator can comfortably operate the clutch and brake pedal while sitting back in the seat. The seat can be adjusted forward or back in any of four positions. If adjustment is required, proceed as follows:

- See figure 10: Position the seat deck as shown by following the instructions under Raising the Seat Deck on page 10.
- 2. Remove the two cap screws and lock washers at (A).
- 3. Remove the two nuts and lock washers at (B).

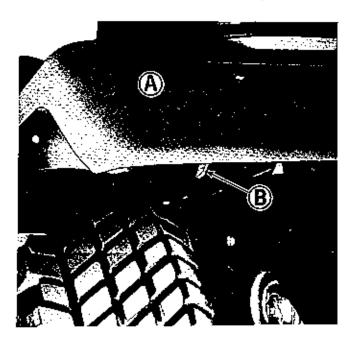


Figure 9. Seat deck release at front of seat deck.

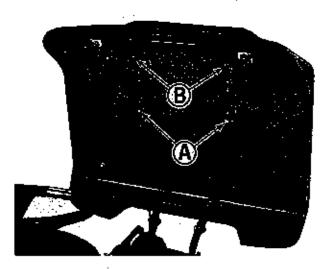


Figure 10. Seat deck raised.

- 4. If the seat is to be positioned in either of the two forward sets of mounting holes the two rubber spacers are placed over the studs at (B) and used between the seat and seat deck. If the seat is to be positioned in either of the two rearward positions, the rubber spacers are placed over the studs (B), but under the seat deck. Line the seat up with the desired holes in the seat deck, and install the rubber spacers according to the holes used.
- 5. Install the two lock washers and nuts at (B) and tighten them securely.
- 6. Install the two cap screws and lock washers at (A) and tighten them securely.
- Lower the seat deck.

#### CLUTCH FREE TRAVEL

See figure 11. The clutch free travel is correct when there is 1/8" between the nuts (A) and the rod guide when the clutch brake pedal is released and pulled rearward as far as

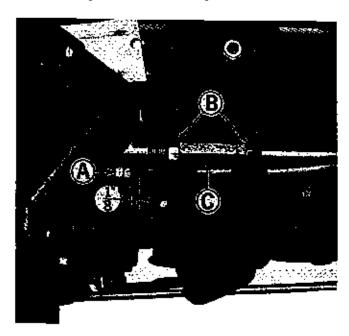


Figure 11. Clutch free travel and hydrostatic transmission neutral adjustment.

- it will go. If adjustment is required, proceed as follows:
- 1. Raise the seat deck as shown in figure 10, by following the instructions under Raising the Seat Deck on page 10.
- 2. Using two wrenches hold the forward nut at (A) stationary with one wrench while turning the rearward nut counter-clockwise slightly with the other to separate them.
- 3. Pull rearward on the clutch brake pedal to insure it has returned completely to the engaged position.
- 4. Turn the forward nut at (A) as necessary so that the distance between it and the rod guide is 1/8" as shown in figure 11.
- 5. Using two wrenches hold the forward nut at (A) stationary while turning the rear one clockwise to tighten the two nuts together securely.
- 6. Lower the seat deck.

#### HYDROSTATIC NEUTRAL ADJUSTMENT

If the tractor tends to creep (move slightly forward or backward) when the hydrostatic speed control lever is in the neutral position, proceed as follows:

- 1. Raise the seat deck by following instructions under Raising the Seat Deck on page 10.
- See figure 30. Raise the spring lock and move the gear shift lever to the neutral position as shown.
- See figure 11. Loosen the two locking nuts (B) on either end of turnbuckle (C).
- Start the tractor engine and set the engine speed control so it runs at about 1/3 full speed.
- 5. Make sure the hydrostatic speed control lever (Figure 2, item B) is in the NEUTRAL position.
- CAUTION: USE CARE WHEN WORKING AROUND MOVING BELTS AND PULLEYS TO KEEP HANDS, CLOTHING, ETC., FROM BEING CAUGHT IN THEM.

Use an open end wrench to rotate the turnbuckle (Figure 11, item C) until the brake drum (Figure 12, item A) does not rotate. When the brake drum does not rotate when the engine is running at 1/3 full speed, the hydrostatic neutral adjustment is correct.

7. Shut off the tractor engine.

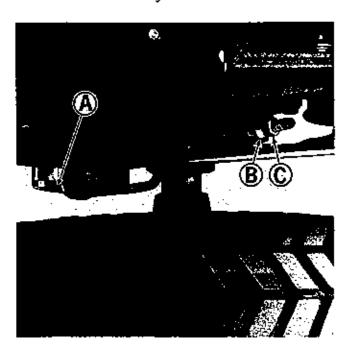


Figure 12. Brake adjustment near right rear wheel.

- 8. See figure 11. After allowing the belt and pulleys to stop turning, use two wrenches to tighten the locking nuts (B) against turnbuckle (C). Tighten the locking nuts (B) one at a time, while using the other wrench to hold turnbuckle (C) from rotating.
- 9. Lower the seat deck. Place the shift lever in DRIVE position and check your adjustment while sitting in the tractor seat by operating the engine at full throttle with the hydrostatic lever in the neutral position.

#### FOOT PEDAL BRAKE ADJUSTMENT

The foot pedal brake should be adjusted so that it will stop the tractor when it is moving backward, but not so tight to prevent the foot pedal from traveling far enough to disengage the clutch. If adjustment is required proceed as follows:

- Lift the seat deck by following the instructions under Raising the Seat Deck on page 10:
- See figure 12. Use one open end wrench to hold nut (B) stationary, and another wrench to turn nut (C) counter-clockwise to loosen it slightly.
- 3. Turning nut (B) clockwise will give more braking action and turning it counter-clockwise will give less. The brake adjustment can best be made by using the trial and error method, and operating the tractor each time an adjustment has been made. The best adjustment can be made by turning nut (B) counter-clockwise until the foot pedal brake does not work. Then turning it clockwise, one turn at a time, until the tractor will stop satisfactorily when rolling backward. This is the correct adjustment. Further tightening may cause the brake to drag, or prevent proper clutch disengagement.
- 4. After you are satisfied that the adjustment is correct use one wrench to hold nut (B) stationary and another to turn nut (C) clockwise to tighten the nuts securely together.
- 5. Lower the seat deck.

#### PARKING BRAKE ADJUSTMENT

Although the hydrostatic transmission may help prevent the tractor from rolling when the engine is stopped, the parking brake should be properly adjusted and used whenever the operator leaves the tractor seat. The parking brake is actuated and adjusted independently of the foot brake. It is correctly adjusted when it will prevent the tractor from rolling either forward or backward and some resistance is felt when it is placed in the engaged position. If it is too tight, it will be difficult to place it in the engaged position. To adjust the parking brake, proceed as follows:

- 1. See figure 13. NOTE: ALL DIRECTIONS GIVEN FOR ADJUSTING THE PARKING BRAKE, ARE AS IF YOU ARE STANDING AT THE FRONT OF THE TRACTOR LOOKING BACK TOWARD THE PARKING BRAKE. Loosen nut (A) by turning it clockwise.
- See figure 13. After insuring the tractor is either on a level surface or the wheels are blocked so it will not roll, pull forward on the parking brake handle (B) to disengage the parking brake.
- 3. Rotate parking handle (B) clockwise to tighten the parking brake, or counter-clockwise to loosen it. Turn the brake one complete revolution when making any adjustment. After turning the handle (B) one revolution place it in the engaged position to check it for correct adjustment. The correct engaged position is as shown in figure 13, with the handle at approximately in the 11 o'clock position as you

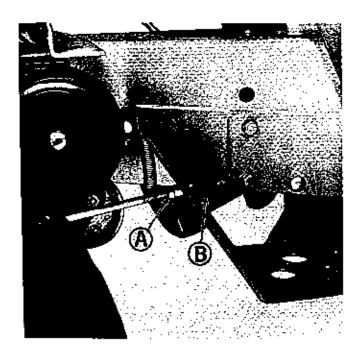


Figure 13. Parking brake adjustment on right side of tractor.

face it from the front of the tractor.

 After the correct adjustment has been made, use a wrench to tighten nut (A) securely by turning it counter-clockwise.

# TRANSMISSION NEUTRAL SAFETY START SWITCH

If the engine starter will not actuate when the hydrostatic control lever is in neutral, or will actuate when the hydrotransmission control lever is not in the neutral position, the neutral safety starting switch may need adjusting. The power take off lever must be disengaged before the starter will operate also. Adjust it as follows:

- Raise the seat deck as explained on page 14 under Raising the Seat Deck.
- Place the hydrostatic transmission control lever back against the neutral stop.
- 3. See figure 14. The neutral safety start switch is properly adjusted when it is centered on pointer (C) and depressed about 1/16" to 1/8". The two nuts (A) may be turned clockwise or counter-clockwise to lower or raise the safety switch and bracket (B) is slotted to allow it to be centered on pointer (C). After adjusting the neutral safety switch place a film of grease on pointer (C) where it contacts the switch.
- Tighten the two nuts (A) against mounting bracket (C).
- Lower the seat deck.
- 6. Check the adjustment by starting the tractor.

#### POWER TAKE-OFF CLUTCH ADJUSTMENT

See figure 15. The power take off clutch is properly adjusted when pulley (A) moves 1/8" when the power take off control lever is engaged and disengaged. If adjustment is required, proceed as follows:

- 1. Raise the seat deck, by following the instructions on page 14 under Raising the Seat Deck.
- Place the power take off clutch control lever in the en-



Figure 14. Neutral safety start switch located under seat deck.

gaged position.

- 3. Observe the movement of pulley (A) in relation to cup (B) as the power take off control is moved slowly from the engaged to disengaged position. If the pulley (A) moves more or less than 1/8" adjustment is required.
- 4. Turn the rear most nut at (C) counter-clockwise to loosen it slightly. To increase the amount pulley (A) travels turn the nuts at (C) clockwise. To decrease travel of pulley (A), turn

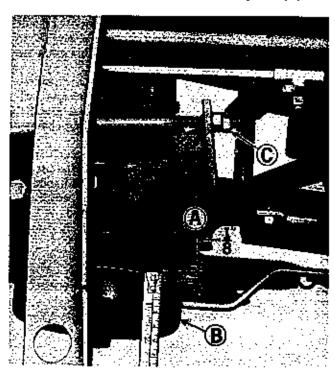


Figure 15. Power take off clutch.

the nuts counter-clockwise. Adjust the nuts at (C) and observe the travel of pulleys (A) as the power take off lever is engaged and disengaged. When adjustment has been made so the pulley (A) travels 1/8" tighten the rear most nut at (C) against the forward nut to lock them in place.

- Recheck your adjustment.
- 6. Lower the seat deck

# POWER TAKE-OFF NEUTRAL SAFETY START SWITCH

If the engine starter will not actuate when the power take off lever is disengaged and the hydrostatic control lever is in neutral, or will actuate when the power take off lever is in the engaged position, the power take off neutral safety starting switch may need adjusting. It is located under the tractor frame, but since the tractor frame is open on the bottom, it can be easily reached from under the tractor. If adjustment is required proceed as follows:

- Place the power take off control lever in the disengaged position.
- 2. See figure 16. Locate the safety switch (A) which is located under the tractor frame.
- See figure 16. The safety switch can be moved up or down by turning the two nuts (A) clockwise or counter-clockwise or forward or back by sliding it in the slot in mounting bracket (B).
- 4. Adjust the safety switch so it is centered on the cam surface (C) and the end of the switch moves about 1/8" when the power take off control lever is moved from the disengaged to the engaged position.
- Tighten the two nuts (A) against the mounting bracket
   (B).
- 6. Check the adjustment by starting the tractor. The starter should actuate when the power take off control lever is in the disengaged position but should not actuate when the power take off control lever is in the engaged position.

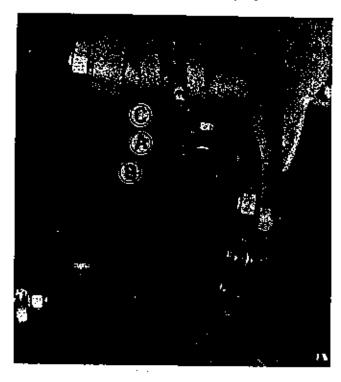


Figure 16. Power take off safety start switch.

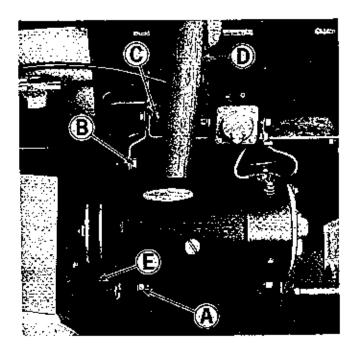


Figure 17. Generator located on right side of engine.

#### STARTER-GENERATOR BELT ADJUSTMENT

See figure 17. If the starter turns, but the engine does not rotate, the starter generator belt may need tightening. Proceed as follows:

- 1. Raise the tractor hood as explained on page 10 under raising the tractor hood.
- 2. See figure 17. Loosen slightly the two nuts (A) cap screw (B) and nut (C). Use a pry bar similar to the one shown between the generator and engine block to apply pressure to the generator and tighten the belt. The belt should be tight enough so thumb pressure at (E) will deflect it about 1/4".
- While holding the pry bar to maintain tension on the belt, tighten the mounting bracket at (C) securely.
- 4. Actuate the starter to make sure the engine will rotate. If it does not, loosen the nut at (C) and apply more tension to the belt.
- 5. Tighten the two nuts at (A) and the cap screw (B) semirely.
- 6. Lower the hood and lock it in place.

#### CARBURETOR ADJUSTMENT

The carburetor is adjusted at the factory and normally does not need adjustment unless it has been disassembled or tampered with.

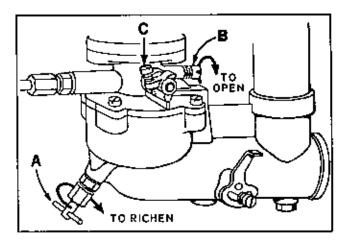


Figure 18. Carburetor adjustments.

INITIAL ADJUSTMENT: Initial adjustment will permit the engine to be started and warmed up prior to final adjustment. Proceed as follows:

- 1. See figure 18. Turn the needle valve (A) clockwise until it just closes. CAUTION: VALVE MAY BE DAMAGED BY TURNING IT IN TOO FAR.
- 2. Open the needle valve (A) one and one half turns counter-clockwise.
- 3. Turn the idle valve (B) clockwise until it just closes.
- 4. Open idle valve (B) one half to three quarter turns.

#### FINAL ADJUSTMENT

- 1. See figure 30. Move the transmission shift lever to the NEUTRAL position, so the tractor will not creep forward or back when the engine is running.
- 2. Start the engine and run it at full speed.
- 3. See figure 18. Turn needle valve (A) clockwise until engine misses, (Lean mixture), then turn it out (counterclockwise) past the smooth operating point, until the engine runs unevenly (Rich mixture). Now turn needle valve (A) to the mid-point between the rich and lean mixture so the engine runs smoothly.
- 4. Move the engine speed control lever to the slow position, and set the idle speed adjusting screw (C) so a fast idle is obtained (1200 RPM). Hold the throttle in this idle position and turn the idle valve (B) clockwise (lean) and countercloskwise (rich) until the engine idles smoothly.
- 5. Reset the idle speed so the engine idles at 1200 RPM. Push the engine speed control lever forward to the fast position, the engine should accelerate without hesitation or sputtering. If the engine does not accelerate properly, readjust needle valve (A) to a slightly richer mixture.

# **MAINTENANCE**

Your Simplicity tractor has been designed and manufactured to give you many years of dependable operation. In order for it to give you efficient, trouble free service over a long period of time the maintenance operations listed here must be performed on a regular basis. The optional hour meter provides an accurate method of determining when these services need to be performed.

A wide variety of attachments and accessories permit use of your tractor throughout the year. BECAUSE YOUR TRACTOR IS A MULTI-SEASON TOOL, IT IS VERY IMPORTANT TO SERVICE THE ENGINE FOR THE SEASON IN WHICH IT WILL BE OPERATED. Be sure to change to winter grade oil before making cold weather starts.

Whenever you are checking fluid levels in any area of the tractor, the readings will be much more accurate if the tractor is setting on level ground. We have provided the Scheduled Maintenance Chart on page 20 as convenient means for you to know which services should be performed at various times. You should, of course, refer to the detailed explanation of how to perform each maintenance task until you are familiar enough with it to perform it correctly from memory.

Refer to your Briggs & Stratton operating and maintenance instructions for more specific detail on servicing the engine.

#### ORDERING REPLACEMENT PARTS

Replacement parts required for performing maintenance services or repair work should be purchased from your Simplicity dealer. When ordering parts be prepared to give him the tractor and engine identification numbers. If you have not already recorded these numbers on the inside front cover of this manual, we suggest that you do so now for convenient future reference.

#### EVERY 5 HOURS OF OPERATION

INSPECT THE TRACTOR AND ENGINE: Make a general inspection of the tractor and engine looking for loose bolts, oil leaks, low tire pressures, etc. A few minutes spent correcting a small problem could prevent a costly breakdown later.

CHECK ENGINE CRANKCASE OIL LEVEL: See figure 19. If the engine has been running, allow a minute or two for the oil to drain down into the crankcase before checking the oil level. Proceed as follows:

- 1. See figure 19. Turn the engine oil filler cap-dipstick (A) counter-clockwise and lift it out.
- Wipe the oil from the dipstick with a clean cloth.
- Replace the filler cap dip-stick in the filler pipe and turn the cap clockwise looking it into position.
- Remove the filler cap dip-stick and check the oil level on the dip stick.
- 5. If the oil is below the full line (B) shown in figure 19, add enough oil to bring the oil level up to the full mark. Use the same grade and weight of oil which is already in the engine. DO NOT OVERFILL THE CRANKCASE.

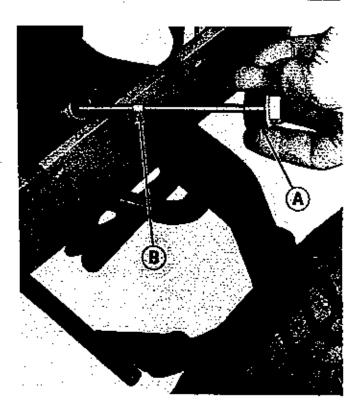


Figure 19. Checking the engine oil at right front of tractor.

6. Replace the filler cap-dipstick (A) and tighten it securely.

#### **EVERY 25 HOURS OF OPERATION**

CLEAN TRANSMISSION OIL COOLER: See figure 20. Use a screw driver to remove plug (A). Inspect the oil cooler (B) and if necessary remove any dirt, chaff or oil, which may decrease the efficiency of the cooler. Dirt and chaff collected on the outside of the cooler can usually be brushed off after the engine has been stopped. Be careful not to bend the cooler fins. If grass, chaff, or dirt collect between the fins, it may be necessary to use air or water pressure to blow it out. A non-flammable solvent should be used to remove any oil which may collect on the outside of the cooler. In warm or dusty operating conditions, or when mowing dry dry grass, the cooler may need to be cleaned more often to prevent foreign material from restricting air flow through it.

CLEAN ENGINE FINS AND SCREEN: See figure 21. The blower screen (A) must be kept relatively free of chaff, grass, etc., which would restrict the flow of cooling air to the engine. Material which collects can normally be removed with a brush after the engine is shut off. The screen may need to be cleaned more often when mowing dry grass.

See figure 23. All grass and chaff should be removed from the engine fins (A); CAUTION: THE ENGINE FINS ARE VERY HOT AFTER THE ENGINE HAS BEEN OPERATED. DO NOT TOUCH THEM UNTIL THE ENGINE HAS BEEN ALLOWED TO COOL. NEVER SPRAY WATER ON A HOT ENGINE.

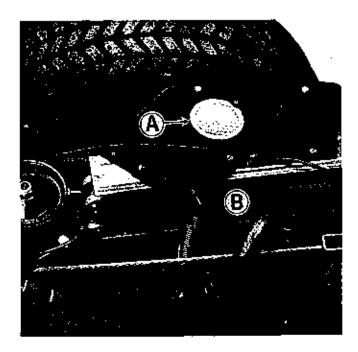


Figure 20. Transmission oil cooler, located under seat deck.

CHANGE ENGINE OIL: Every 25 hours or more often under dusty operating conditions, change the engine oil, using an oil with designation of SC or SD or MS.

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SUMMER	WINTER			
(Above 40°F.) Use SAE 30	(Under 40°F.) Use SAE 5W-20 or SAE 5W-30	Below 0°F, Use SAE 10W or SAE 10W-30 Diluted 10%		
If not available, Use SAE 10W-30 or SAE 10W-40	If not available, Use SAE 10W or SAE 10W-30	with Kerosene		

- Operate the engine at least 10 minutes or until it is warm so the oil will drain freely.
- 2. See figure 22. Remove the drain plug (A) from the bot-



Figure 21. Engine blower screen located at rear of engine as seen from beneath tractor.

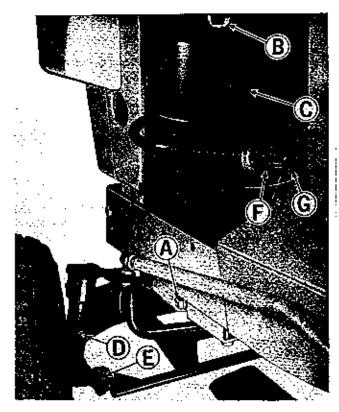


Figure 22. Left front of tractor.

tom of the engine base and allow the oil to drain.

- After the oil has been completely drained from the engine replace the drain plug and tighten it securely.
- 4. See figure 19. Remove the filler cap-dipstick (A) and pour (2 quarts) of oil into the engine through the oil filler pipe, being careful not to allow any dirt or foreign material to contaminate the oil.
- 5. Check the oil level. It should show up to the full mark (B) on the dipstick.
- Replace the oil filler cap-dipstick, start the engine and check for leaks.

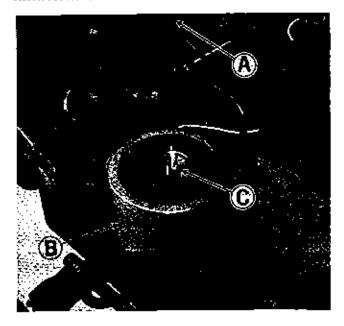


Figure 23. Air cleaner with cover removed on left side of engine.

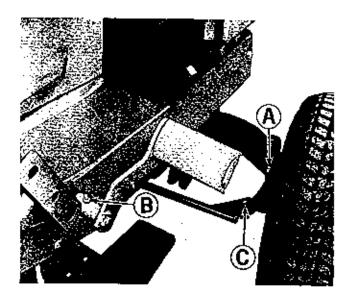


Figure 24. Right front corner of tractor,

CLEAN ENGINE AIR FILTER: The foam precleaner should be removed and cleaned at 3 month intervals or every 25 hours of operation, which ever occurs first.

- 1. See figure 22. Remove the wing nut (B) and cover (C) from the air cleaner unit.
- 2. See figure 23. Remove the foam precleaner (B) and wash it in liquid detergent and water and squeeze dry.
- 3. Oil the precleaner with one ounce of engine oil, and squeeze it to distribute the oil evenly.
- 4. Install the foam precleaner as shown in figure 23.
- 5. See figure 22. Replace the air cleaner cover (C) and fasten it securely with wing put (B).

LUBRICATE GREASE FITTINGS: Your tractor has 6 grease fittings which should be lubricated every 25 hours with multi-purpose gun grease. Wipe the fittings clean and lubricate each one with five shots of grease, or until the

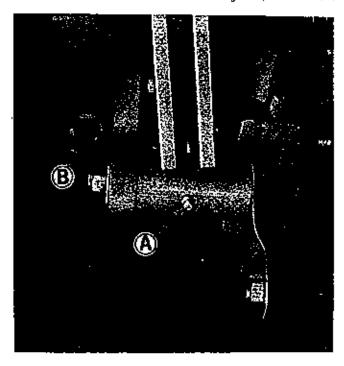


Figure 25. Steering gear as seen from beneath tractor.

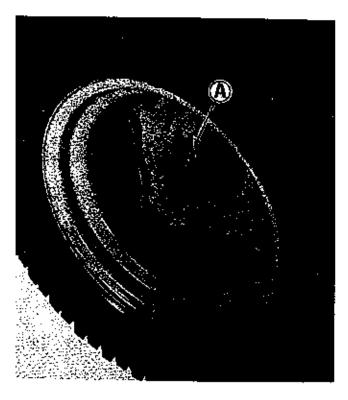


Figure 26. Grease zerk located inside right wheel hub.

grease is seen being forced from the bearing. When operating under extremely wet or dusty conditions, lubricate more often. The grease fittings are located as follows:

LOCATION	ILLUSTRATION
Left Spindle	Figure 22, Item D
Right Spindle	Figure 24, Item A
Clutch-brake Pedal	Figure 24, Item B
Steering Bracket	Figure 25, Itam A
Right Axle Hub	Figure 26, Item A
Right Axle	Figure 27, Item A

LUBRICATE PIVOT POINTS: Every 25 hours a film of grease should be placed at the end of the neutral start safety switch and on the steering gear to provide smoother operation and help reduce wear. They are located as follows:

LOCATION	ILLUSTRATION
Neutral Safety Start Switch	Figure 14, Item C
Steering Gear	Figure 25, 1tem B

A few drops of engine oil placed on the tractor pivot points will help reduce wear and provide smoother operation of the tractor and its controls. Every 25 hours or more often under wet or dusty operating conditions, place a few drops of SAE30 engine oil on the pivot points, being careful not to get oil on belts or pulleys as it may cause them to slip. Pivot points are located as follows:

LOCATION	ILLUSTRATION
Left Tie Rod End	Figure 22, Item E
Right Tie Rod End	Figure 24, Itom C
Front Axle Pivot	Figure 28, Item A
Power Take Off Pivot	Figure 29. Item A

CHECK TIRE PRESSURE: Tires will last longer and perform better if they are kept properly inflated. They



Figure 27. Grease zerk on right rear axle.

should be inflated as follows: Front tires 12 to 15 PSI. Rear tires 6 to 8 PSI.

CHECK TRANSMISSION OIL (FLUID) LEVEL: See figure 31. The reservoir for the hydrostatic transmission oil must be kept filled to the bottom threads of check plug (A). To check the reservoir oil level remove plug (A) If oil is not up to the bottom threads of the hole, add Dexron automatic transmission oil. Adding transmission oil will be easier by removing uut (B) and reservoir cover (C). Clean cover (C) carefully before removing it to prevent dirt or foreign materials from contaminating the oil in the reservoir. After filling the reservoir to the level of check plug (A), replace check plug (A) cover (C), and nut (B), and tighten securaly.

CHECK AXLE HOUSING OIL LEVEL: See figure

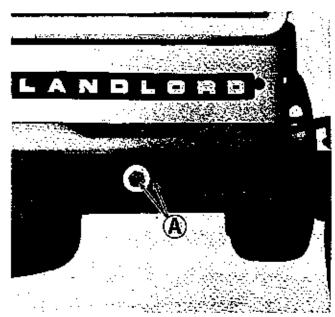


Figure 28. Front of tractor showing exte pivot.

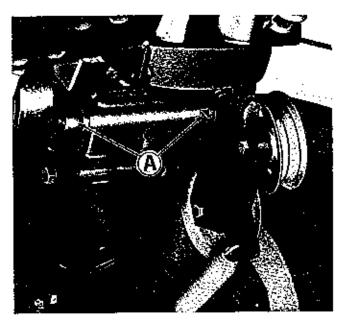


Figure 29. Power take off idler pulley, pivot points as seen from beneath tractor.

30. Remove pipe plug (A) to check the oil level in the axle housing. Oil should be level with the top of the elbow. If it is not, add SAE 90 weight transmission oil. Replace the plug and tighten it securely.

If it should be necessary to drain the axle housing, the drain plug is located at (B). Always tighten it securely when replacing to prevent oil leakage.

CHECK BEVEL GEAR BOX OIL LEVEL: See figure 31. The check and fill plug for the bevel gear box is located at (D). Remove it to check the oil level. The bevel gear box is properly filled when oil is visible at the bottom of the elbow. If filled to the top of the elbow, oil may be forced out

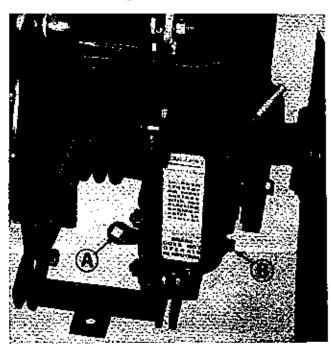


Figure 30. Rear of tractor showing axle drive housing.

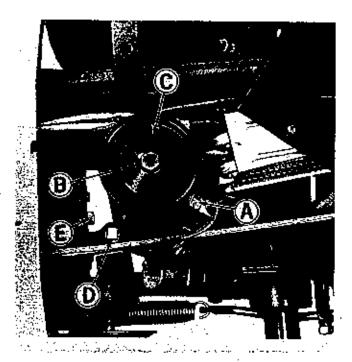


Figure 31. Hydrostatic transmission fluid reservoir and bevel gear housing located under seat deck.

the vent plug located on top of the bevel gear housing. If oil is required, add SAE 90 weight transmission oil. Fill only until oil can be seen in the bottom of the pipe elbow. If it should be necessary to drain the bevel gear housing, the drain plug is located at (E). Always tighten it securely when replacing to prevent oil leakage.

CHECK BATTERY WATER LEVEL: See figure 32. Every 25 hours, or more often when operating the tractor in temperatures above 72°F, remove the 6 battery caps (A) and check the water level in each cell. When the battery is in use, water evaporates from it. Never allow the water level in the battery to get below the top of the plates. Fill the battery to marking ring (D) with distilled water as shown in figure 32. If distilled water is not available, clean tap water may be used.

#### **EVERY 100 HOURS OR ONCE A YEAR**

#### CLEAN OR REPLACE AIR FILTER ELEMENT:

The engine air cleaner is made up of two types of filters. The foam filter (Figure 23, Item B) and a dry filtering element. The foam element should be cleaned and oiled every 25 hours as explained under the Every 25 Hour Maintenance Services. Once a year or every 100 hours, which ever occurs first, the paper element should be removed and cleaned or replaced. Proceed as follows:

- See figure 22. Remove wing nut (B) and cover (C) from the air cleaner.
- See figure 23. Remove the foam element (B) and clean and oil it as described in the Every 25 Hour Maintenance Service.
- Remove wing nut (C) and remove the paper element from the air cleaner.
- 4. Clean the element by tapping it gently on a flat surface. If it is very dirty, replace the element or wash it in detergent, and water rinse until water remains clear. The element must

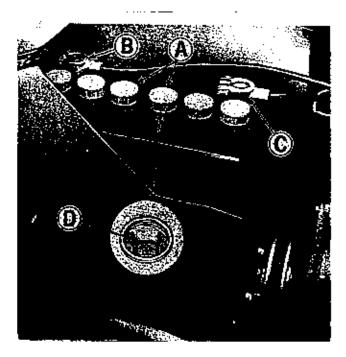


Figure 32. Tractor battery visible when hood is raised.

be dried thoroughly before using.

- See figure 23. Replace the paper element and wing nut(C) and tighten it securely.
- Install the foam element (B) over the paper element as shown in figure 23.
- See figure 22. Replace cover (C) and wing nut (B) and tighten securely.

REPLACE FUEL FILTER: See figure 22. Every 100 hours or more often under dirty field conditions, the fuel filter (F) should be replaced. CAUTION: DO NOT REMOVE THE FUEL FILTER WHEN THE ENGINE IS HOT, AS SPILLED GASOLINE MAY IGNITE. USE CARE WHEN REMOVING AND INSTALLING CLAMPS (G), NOT TO SPREAD THEM ANY MORE THAN NECESSARY AS THEY MAY TAKE A SET AND NOT HOLD THE HOSE TO THE FILTER PROPERLY.

In extremely dirty fuel conditions, the fuel filter may become filled with dirt and restrict fuel flow. The filter can be washed in solvent and blown out with compressed air and used.

REPACK FRONT WHEEL BEARINGS: Every 100 hours of operation or once a year, the front wheel bearings should be removed and repacked with grease. Proceed as follows:

- Block or jack the front of the tractor so the wheel you are to work on is not supporting the tractor.
- See figure 33. Remove the grease cup (A) by prying off with a screw driver.
- 3. Use an Ailen wrench to loosen the set collar (B).
- 4. Remove the set collar (B), washer (E), outer bearing (C), wheel (D), and inner bearing (F). It is best to keep the two bearings separate so you can put them back in their original place. Wash the bearing shaft, bearings, and wheel housing with a solvent such as kerosene and wipe dry. Inspect the

		After each cycle of indicated hours			ted hours
Service Required	Page	5	25	100	
Inspect the tractor and engine	15	•			
Check engine crankcase oil level	15				<b></b>
Clean transmission oil cooler*	15	<del>                                     </del>	•		
Clean engine fins and screen*	15		•		1
Change engine oil* (First change 5 hours)	16		•		1
Clean engine air filter*	17			!	
Lubricate gresse fittings*	.17		•		
Check tire pressure	17		•		
Check transmission oil (fluid) level	18		•		
Check exte housing oil level	18		•		
Check bevel gearbox oil level	18	1	•		
Check battery water level*	19	T"	•		
Check or replace air filter element*	19			•	
Replace fuel filter*	19			•	
Repack front wheel bearings	19			•	
Clean and reset spark plug	20			•	
Clean battery cables	20			•	1

<sup>\*</sup>More often under dusty and/or hot weather operating conditions.

See your Briggs and Stratton Instructions for more complete information on servicing the engine.



Figure 33. Left front spindle and axle assembly.

seal of the inner wheel. Replace it if it is damaged. NOTE: IT IS EXTREMELY IMPORTANT THAT THE BEARINGS AND GREASE THAT IS PACKED IN THEM BE KEPT CLEAN.

- 5. Using the palm of your hand, force a good quality wheel bearing grease into the bearings. Place a coating of grease on the seal where it turns in the hub.
- See figure 33. Replace the inner bearing and slide the wheel on the axle.
- 7. Replace the outer bearing, washer, and the set collar. Spin the wheel slowly and press in on the set collar to seat the bearing. Be sure the seal on the inside of the wheel is properly seated. Hold in on the set collar and tighten the Allen screw securely.
- 8. Replace the grease cup.

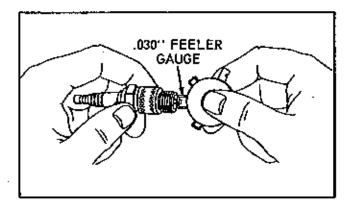


Figure 34. Setting spark plug gap.

CLEAN AND REPLACE SPARK PLUG: See figure 34. Every 100 hours the spark plug should be removed, cleaned, and the gap reset at .30". When the spark plug is worn out, replace it with AC GC 46, Autolight A 71 or Champion J-8. CAUTION: BLAST CLEANING OF SPARK PLUGS IN MACHINES THAT USE ABRASIVE GRIT IS NOT RECOMMENDED. SPARK PLUGS SHOULD BE CLEANED BY SCRAPING OR WIRE BRUSHING, AND WASHING WITH A COMMERCIAL SOLVENT OR GASOLINE.

CLEAN BATTERY CABLES: See figure 32. Every 100 hours or once a year the battery cables (B) and (C) should be removed and cleaned. CAUTION: ALWAYS REMOVE THE NEGATIVE "GROUND CABLE" (C) FIRST AND REPLACE IT LAST. Clean the battery with soap and water to remove all dirt, oil and corrosion from the battery surface. Do not allow foreign material or cleaning solution to get inside the battery. Clean the terminals and battery clamps with a wire brush. Replace and tighten securely. After tightening coat the terminals and clamps liberally with a coat of grease or vaseline to inhibit corrosion.

# **ACCESSORIES**

There are many optional accessories available for your Landlord or Sovereign tractor through your Simplicity dealer. They will make your tractor perform better, or easier to operate when using various attachments. For recommended accessories to use, when your tractor is to be operated with an attachment, see the Operation Chart on page 10. See your Simplicity dealer if you wish to purchase any of the following:

540 RPM REAR PTO (1-1/3") SPLINE

**BALL HITCH - FRONT** 

**BALL HITCH - REAR** 

FRONT LIGHT KIT (Standard Equipment on Sovereign)

REAR LIGHT KIT

**HUB CAPS (Set of 4)** 

WHEEL WEIGHTS - REAR

WHEEL WEIGHTS - FRONT

WEIGHT, AUXILIARY (Fits on Rear Weight)

**POWER LIFT KIT** 

**DUAL LIFT LÉVER** 

**REAR LIFT KIT** 

TIRE CHAINS

STORAGE COVER (Tractor and mower or grader blade)

STORAGE COVER (Tractor, mower and tiller, or snow thrower or dozer blade)

CUSTOMER TOOL KIT (Wrenches, pliers, screw drivers)

HOUR METER

# ATTACHMENTS\_

To make your Landiord or Sovereign tractor most useful to you, Simplicity manufactures a complete line of attachments for it. They are available through your Simplicity dealer. Contact him if you wish to purchase any of the following:

48" ROTARY MOWER (Sovereign Tractor only)

42" ROTARY MOWER

11' ROTARY TRAILING MOWER CARRIER

46" SICKLE BAR MOWER

**VACUUM COLLECTOR** 

CART COVER (High capacity)

CART COVER (Low profile)

ROVING NOZZLE FOR VACUUM COLLECTORS

CART - DUMP 1000 POUND CAPACITY

CART - DUMP 400 POUND CAPACITY

38" LAWN REVITALIZER (Thatcher, aerator)

36' LAWN ROLLER (Water filled)

42" ROTARY SNOW THROWER (Sovereign Tractor only)

36" ROTARY SNOW THROWER

48" SNOW PLOW AND DOZER BLADE

42" SNOW PLOW AND DOZER BLADE

**SNOW CAB** 

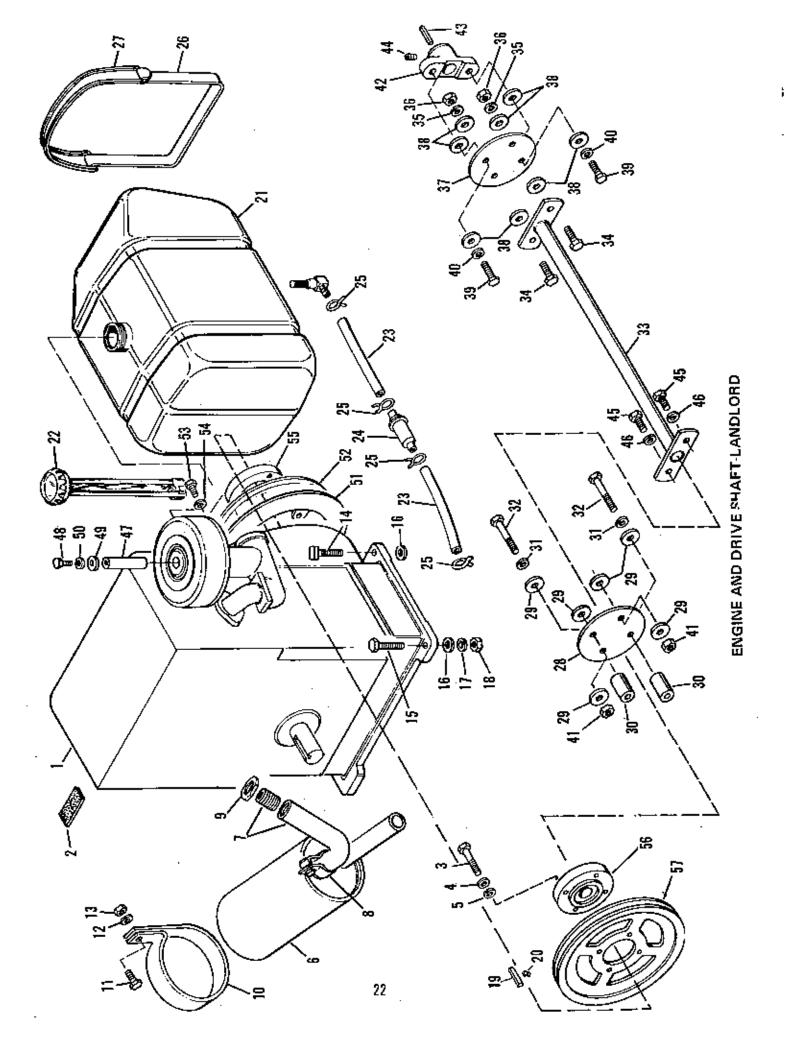
36" ROTARY TILLER

10" PLOW

CULTIVATOR

SPRING TOOTH HARROW

42" GRADER BLADE

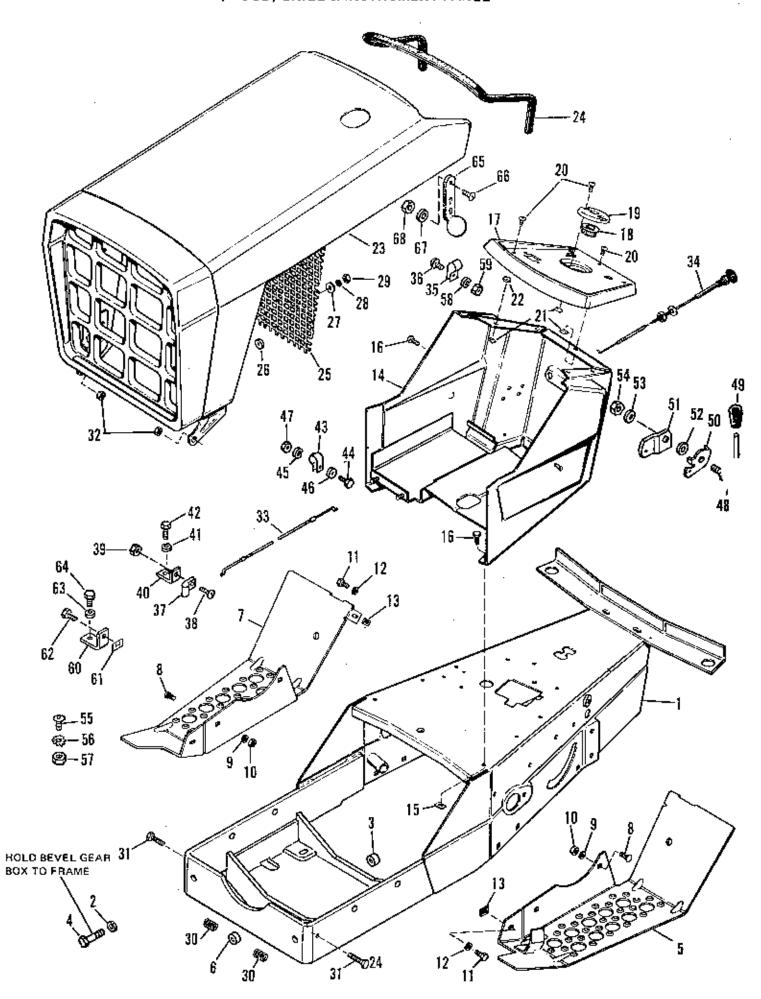


## ENGINE AND DRIVE SHAFT LANDLORG

	_	<del></del>		
Re	£.		Qty.	
Ť¢.	).	Part No.	Req.	Description
_				
1 1			1	Engine
2		173335	1	Pad, Fuel Tank
] 3		715068	2	Hex Cap Screw, 5/16"-18 x 2"
4		719002	2	Plain Washer, 5/16"
5		720001	2	Lock Washer, 5/16"
6		170456	1	Muffler, Exhaust
7		172195	1	Elbow & Nipple Assy.
8	.	172061	1	Muffler Clamp
9		154378	1	Lock Nut
10		171880	1	Strap, Muffler
11		705012	1	Hex Cap Screw, 5/16"-18 N.C.
1	i			× 5/8″
12	:	720001	1	Lock Washer, 5/16"
13		717001	ī	Hex Nut, Full, 5/16"-18 N.C.
14		172455	1	Rec't. Head Screw, 3/8"-16
**		112140	1	N.C. x 1-5/16"
15		705009	3	Hex Cap Screw, 3/8"-16 N.C.
-~		,,,,,,,,	ľ	x 1-1/2"
16		719001	4	Plain Washer, 3/8" Std.
17		720002	4	Lock Washer, 3/8"
18		720002	4	Hex Nut Full, 3/8"-16 N.C.
		171241		
19			1 1	Key
20	'	713504	1	Cup Pt. Socket Head Set
١.,		363336	١.	Screw, 5/16"-18 N.C. x 5/8"
21		171115	1	Tank, Fuel
22	-	171252	1	Cap, Fuel Tank
23		123204	2	Hose, Fuel, Flexible
24	-	173206	1	Fuel Filter
25		154372	.4	Clamp, Hose
26		171330	2	Strap, Tank
27		172744	2	Strap, Fuel Tank
28		173026	1	Coupling
29		157424	8	Washer, Special
30		8161056	2	Bearing, Pivot Block
31		720002	2	Lock Washer, 3/8"
32		715036	2	Hex Cap Screw, 3/8"-16x2-1/4"
33		172328	1	Shaft Assy., Drive
34	Į.	172677	2	Hex Cap Screw, 3/8"-16 x
,				1-1/8"
35		720002	2	Lock Washer, 3/8"
36		717003	2	Hex Full Nut, 3/8"-16
37		173026	1	Coupling
38	;	157424	8	Washer, Special
39	}	172677	2	Hex Cap Screw, 3/8"-16 N.C.
				x 1-1/8"
40	1 :	720002	2	Lock Washer, 3/8"
41	.	717003	2	Hex Nut, Full, 3/8"-16 N.C.
42	:	172264	1	Flange, Drive Shaft
43	;	157427	1	Key, Drive Shaft
44	ı I	715049	1	Cup Pt. Socket Head Set
1				Screw, 3/8"-24 N.F. x 3/8"
45		172677	2	Hex Cap Screw, 3/8"-16
"		2.20	_	N.C. x 1-1/8"
46	, İ	720002	2	Lock Washer, 3/8"
47	-	157126	1	Air Cleaner Spacer
48		715018	i	Hex Cap Screw, 1/4"-20 N.C.
1		.10010	•	x 5/8"
49	,	719006	1.	Plain Washer, 1/4"
50		720003	1	Lock Washer, 1/4"
L	<u> </u>	, 20000	_ ^	Don trustet, 1/2

Ref. No.	Part No.	Qty. Req.	Description	
51	157099	1	Flywheel Shroud	
52	157306	1	Shroud	
53	705002	4	Нех Сарьстем	
		]	1/4"-20 x 1/2"	
54	720003	4	Lock Washer, 1/4"	
55	157355	1	Spacer	
56	157305	1	Engine Pulley	
57	172673	1	Drive Hub	
		•		

NOTE: Ref. Nos. 3, 4, 5, 51 through 57 used on 10 H.P. Models only

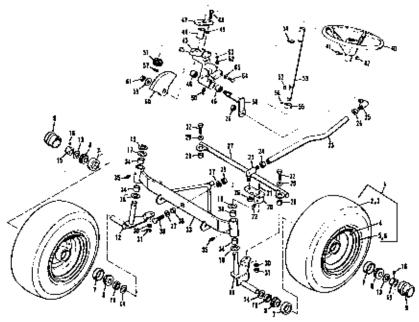


# FRAME, HOOD, GRILL & INSTRUMENT PANEL - LANDLORD

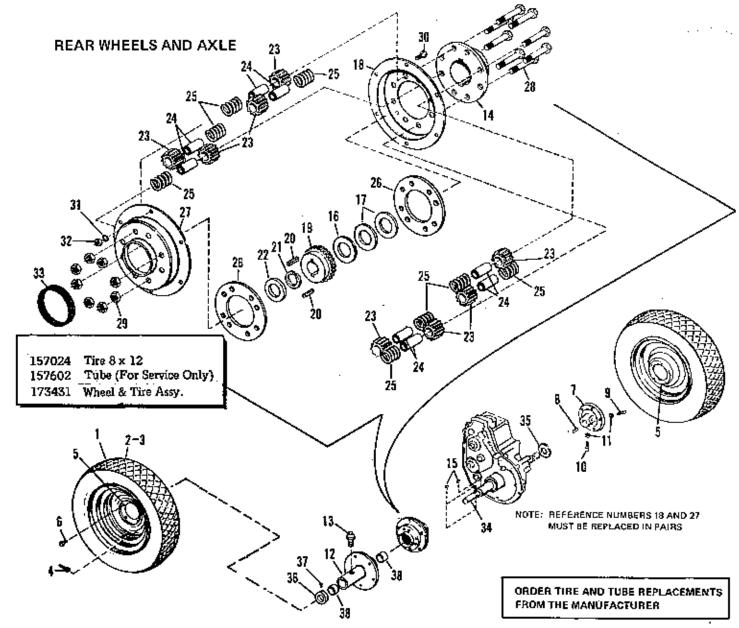
Ref. No.	Part No.	Qty. Req.	Description
1	174095	1	Frame Assy.
2	720006	4	Lock Washer, 7/16"
3	154289	1	Bushing
4	705039	4	Hex Cap Screw, 7/16"-14 N.C. x 1-1/2"
5	171272	1	Foot Rest R.H.
6	174662	1	Bushing
7	171271	1	Foot Rest L.H.
8	702015	6	Carriage, Bolt, 5/16"-16 N.C. x 3/4"
9	720001	6	Lock Washer, 5/16".
10	717001	6	Hex Nut, Full, 5/16"-18 N.C.
11	705017	2	Hex Cap Screw, 5/16"-18 N.C. x 3/4"
12	720001	2	Lock Washer, 5/16"
13	718024	2	Nut, Tinnerman, 5/16"-18 N.C.
14	171266	1	Dash Assembly
15	718038	8	Nut, Tinnerman
16	714031	11	Hex Head Self Tapping Screw,
	i		No. 14 AB x 3/4"
17	171231	1	Panel, Instrument
18	157077	1	Bushing, Steering
19	172008	1	Plate, Steering Adj.
20	711002	6	Round Head Phillips Screw, 1/4"-20 N.C. x 1/2"
21	718043	6	Nut, Tinnerman, 1/4"-20 N.C.
22	719007	4	Plain Washer
23	171226	1	Grille & Hood Assy.
24	172935	1	Molding, Hood
25	171232	1	Screen, Grille
26	171804	2	Washer
27	172742	2	Washer
28	721003	4	Lock Washer, Shakeproof No.
29	717023	4	Nut, Hex Full, No. 10-24 N.F.
30	8191047	2	Spring
31	705009	2	Hex Cap Screw, 3/8"-16 N.C. x 1-1/2"
32	717510	2	Hex Lock Nut, Center, 3/8"- 16 N.C.

	<del></del>	· ·	Τ.	<del></del>
	Ref	!	Qty.	
	No.	Part No.	Req.	Description
	33	171355	1	Throttle Control
	34	171334	1	Choke Control
	35	158475	1	Clip, Bowden Wire
	36	714005	1	Self Tapping Rd. Hd. Screw,
i			-	No. 10-24 N.C. x 1/2"
	37	158475	1	Clip, Bowden Wire
	38	710004	1	Rd. Hd. Mach. Screw, No.
				10-32 N.F. x 3/8"
	39	717007	1	Full Hex Nut, No. 10-32 N.F.
1	40	157315	1	Bracket, Throttle Cable
i	41	720003	1	Lock Washer, 1/4"
١	42	714021	1	Self Tapping Rec. Hex Hd.
١				Screw, 1/4"-20 N.C. x 5/8"
١	43	122186	1	Clamp
١	44	705015	1	Hex Cap Screw, 1/4"-20 N.C.
ŀ				x 5/8"
Ì	45	720003	1	Lock Washer, 1/4"
ı	46	719006	ı	Plain Washer, 1/4" Std.
١	47	717005	1	Hex Nut Full, 1/4"-20 N.C.
١	48	172040	1	Throttle Handle
١	49	172038	1	Knob
ł	50	171848	1	Stop Throttle
ı	51	158424	1	Arm Throttle
ı	52	159107	1	Washer
ı	53	721602	1	Washer Lock Dished Type, 3/8"
ı	54	717510	1	Full Lock Hex Nut, 3/8"-16
1		1 _	<b>l</b> .	N.C.
ı	55	711003	1	Truss Hd. Screw, No. 10-
ı		<b>.</b>		32 x 1/2"
ı	56	171804	Ì	Washer ·
ı	57	717507	1	Gripco Lock Nut 10-32 x 1/2"
Ì	58	720007	2	Lock Washer, No. 12
ı	59	717023	2	Hex Nut Full, No. 10-24
I	60	158611	1	Bracket, Pulley Guard
I	61	718043	1	Nut, Tinnerman
ľ	62	715057	1	Hex Cap Screw, 1/4"-20 x
ĺ	62	710007	,	3/4"
l	63 64	719007	1 1	Plain Washer, 3/16"
l	64	714032	1	Hex Hd. Screw, No. 14 x
ı	65	171400	,	1-1/4"
1		171600	2	Hood Strap
ĺ	66	710002	2	Rd. Hd. Mach, Screw, No. 10- 32 x 1/2"
۱	67	721003	2	Lock Washer, Shakeproof No. 10
۱	68	717007	2	Nut, Hex Full, No. 10-32
			ľ	
_			_	

# FRONT WHEELS, AXLE, TIE ROD & STEERING

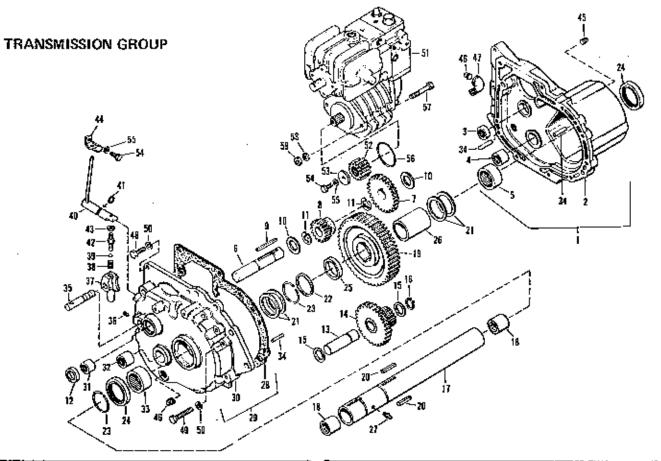


Ref. No.	Part No.	Qty. Req.	Description	Ref. No.	Part No.	Qty. Req.	Description
1	171376	2	Wheel & Tire Assy.	35	727001	2	Fitting, Grease
2	157490	2	Tire	36	157618	1	Spacer
3	164247	2	Tube	37	719004	2	Plain Washer, 1/2"
4	156305	2	Valve Stem & Cap	38	715132	1	Hex Cap Screw, 1/2"-13 N.C.
5	171377	2	Wheel-Sub Assy.				x 1-3/4", Grade 5
6	171378	2	Wheel (Front)	39	717518	1	Hex Nut, Full Lock, 1/2"-13
7	154393	4	Bearing, Cup				N.C.
8	154486	4	Bearing, Cone (Without Seal)	40	171196	1	Steering Wheel
9	154487	2	Hub Cap	41	715046	1	Hex Head Screw, 5/16"-18
10	170168	2	Seal				N.C. x 1-1/4"
11	171774	1	Spindle Assy. L.H.	42	717511	1	Hex Nut, Lock 5/16"-18 N.C.
12	157 <del>49</del> 4	1	Spindle Assy. R.H.	43	170960	1	Steering Bracket, Casting
13	108181	2	Washer	44	170992	1	Bushing, Steering
14	171375	2	Spacer	45	171832	1	Casting and Bearing
15	8021010	2	Collar, Set	46	154258	2	Bearing, Needle
16	713503	2	Cup Pt. Socket Head Set Screw	47	171000	1	Plate, Steering
			5/16"-18 N.C. x 5/16"	48	705016	2	Hex Cap Screw, 3/8"-16 x
17	8061012	1	Washer (Use Beneath Snap				1-1/4"
			Ring)	49	717524	2	Hex Jam Nut, 3/8"-16
18	108181	3	Washer	50	727001	1	Fitting, Greaso
19	157286	1	Ring, Retaining	51	170988	lı	Pinion, 15T, Bevel
20	170998	1	Arm Assy., Strg. L.H.	52	725002	lī	Key, Woodruff, No. 6 5/32"
21	157427	2	Key	-			W. x 5/8" Dia,
22	713006	2	Cup Pt. Socket Head Set	53	171020	ı	Shaft, Steering
			Screw, 5/16"-18 N.C. x 1/2"	54	154264	1	Ring, Retaining
23	171830	1	Rod, Tie	55	8021010	ī	Collar, Set
24	717016	2	Hex Nut, Jam, 1/2"-20 N.F.	56	713502	lī	Set Screw, 5/16"-18 N.C. x
25	164272	2	Joint, Ball	1 -		-	1/4"
26	717528	2	Hex Nut, Jam Lock, 1/2"	57	158596	l ı	Ring, Retaining
			20 N. F.	58	170999	lī	Arm Assy. Steering
27	157499	1.	Link Assy., Drag	59	719003	1	Plain Washer, 7/16"
28	154177	2	Spacer	60	170987	1	Gear, 23T, Bevel
29	719001	2	Washer, Plain, 3/8"	61	717519	1	Hex Nut, Lock, 7/16"-14 N.C.
30	720002	2	Lock Washer, 3/8"	62	715030	Ī	Hex Cap Screw, 3/8"-16 N.C.
31	717003	2	Hex Nut, Full, 3/8"-16 N.C.			_	x 3/4"
32	705016	2	Hex Cap Screw, 3/8"-16 N.C. x	63	720002	1	Lock Washer, 3/8"
			1-1/4"	64	705031	2	Hex Cap Screw, 3/8"-16 N.C.
33	157616	1	Axle Assy., Front				x 7/8"
34	154289	4	Bushing	65	720002	2	Lock Washer, 3/8"



Ref. No.	Part No.	Qty. Req.	Description
1	173432	2	Wheel & Tire Assy.
2	157637	2	Tire 10-1/2" x 12
3	157638	2	Tube
4	172353	2	Valve Stem
5	173430	2	Wheel Drive
6	8261100	10	Hub Bolt
7	154208	1	L.H. Wheel Hub
8	159129	1	Key
9	715022	1	Set Screw, 3/8"-16 x 1-1/2"
10	713004	ı	Set Screw, 3/8"-16 x 1"
11	717013	2	Hex Jam Nut, 3/8"-16
12	173276	2 1 1	R.H. Wheel Hub Assy.
13	727004	1	Grease Fitting
' '4	164217	1	Differential Carrier
5	157120	2	Driva Key
. 16	171515	1	Axle Washer
17	154035	2	Axle Washer
18	171853	1	Differential Cover
19	164219	1	Differential Gear
20	725501	2	Hi-Pro Key

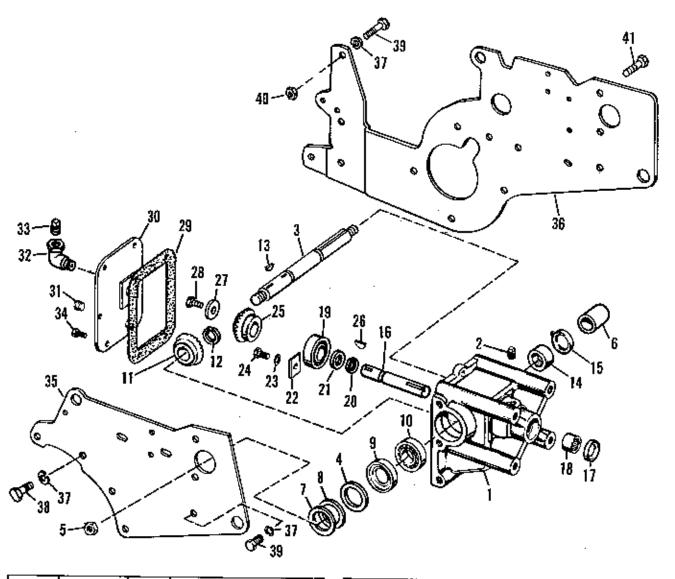
Ref. No.	Part No.	Qty. Req.	Description
21	154291	1	Retaining Ring
22	154277	1	Axle Washer
23	158579	8	Differential Pinion
24	121083	8	Differential Pinion Spindle
25	162085	8	Spring
26	171517	2	Ring Spacer
27.	171854	1	Differential Cover
28	715043	8	Hex Cap Screw, 3/8"-16 x 2-1/2"
29	717510	8	Full Lock Hex, Nut, 3/8"-16
30	705015	6	Hex. Cap Screw, 1/3"-20 x 5/8"
31	720003	6	Lock Washer, 1/4"
32	717005	6	Full Hex Nut, 1/4"-20
33	121190	1	Differential Cover Seal
34	171526	1	Rear Axle
35	105050	1	Washer
36	154065	2	Axle Collar
37	713002	4	Set Screw, 5/16"-18 x 3/8"
38	153068	2	Bearing



Ref. No.	Part No.	Qty. Req.	Description
1	166105	1	Gear Case Complete (includes
			2 thru 5)
2	166001	1	Gear Case
3	154271	1	Needle Bearing
4	166018	1	Needle Bearing
5 6	157519	1	Needle Bearing
6	166011	1	Brake Shaft
7 8	166004	1	Gear · 1st Interm,
	166005	1	Sliding Pinion
9	166014	1	Key
10	166013	2	Washer
11	166015	2	Retainer Ring
12	166021	1	Oi) Seal
13	166012	1	Shaft, Interm.
14	166010	1	Pinion & Gear Assembly
15	166016	2	Washer .
16	166017	1	Retaining Ring
17	166066	1	Axle Tube Assembly
18	164224	2	Bushing
19	166006	1	Drive Gear
20	154096	2	Key
21	154097	4	Washer
22	166167	1 <sub>.</sub>	Washer
23	154268	2	Snap Ring
24	154269	2	Seal
25	166040	1	Spacer (R.H. Side)
26	166041	1	Spacer (L.H. Side)
27	727002	1	Grease Fitting
28	166043	1	Gear Case Gasket
29	166103	1	Gear Case Cover Sub. Assy.
			(Includes 30, 31, 32, 33)
30	166002	1	Gear Case Cover

31	Ref.	Part No.	Qty. Req.	Description
32	110.	ratt No.	Ked.	Description
32	31	166019	1	Needle Bearing
34 723007 2 Roll Pin, 3/8" x 1" 35 166028 1 Shifter Shaft 36 715019 1 Cone Pt. Setscrew, Hollow Hd 5/16"-18 x 1/2" 37 166027 1 Shift Fork 38 154323 1 Spring 39 154262 1 Shift Lock Ball 40 166164 1 Shift Shaft Assembly 41 166023 1 "O" Ring 42 166029 1 Shift Stem 43 717029 1 Hex Jam Nut, 5/16"-24 44 166162 1 Lift Lever Latch 45 726002 1 Pipe Plug, 1/4" 46 726003 2 Pipe Plug, 3/8" 47 728501 1 Street Elbow, 3/8" 48 705007 5 Hex Cap Screw, 5/16"-18 x 1' 49 705020 4 Hex Cap Screw, 5/16"-18 x 2' 50 720001 9 Lock Washer, 5/16" 51 166097 1 Hydrostatic Pump & Motor Unit 52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4' 58 720006 2 Lock Washer, 7/16"	32	166018	ı	-
Shifter Shaft	33	157519	1	Needle Bearing
S5	34	723007	2	Roll Pin. 3/8" x 1"
5/16"-18 x 1/2"  38	35	166028	lı	• -
S/16"-18 x 1/2"   Shift Fork   Spring   Shift Lock Ball   Shift Shaft Assembly   166164   Shift Shaft Assembly   166023   Shift Stem   Hex Jam Nut, 5/16"-24   Lift Lever Latch   Pipe Plug, 1/4"   166162   Lift Lever Latch   Pipe Plug, 3/8"   Street Elbow, 3/8"   Hex Cap Screw, 5/16"-18 x 1'   Hex Cap Screw, 5/16"-18 x 2'   Lock Washer, 5/16"   Hex Cap Screw, 5/16"   Hex Cap Screw, 5/16"   Hex Cap Screw, 5/16"   Street Elbow   Shift Stem   Hex Cap Screw, 5/16"   Hex Cap Screw, 5/16"   Street Elbow, 3/8"   Hex Cap Screw, 5/16"   Lock Washer, 5/16"   Hex Cap Screw, 5/16"-24 x   S/8"   Lock Washer, 5/16"   Lock Washer, 5/16"   Hex Cap Screw, 7/16"   Hex Cap Screw, 7/16"   Lock Washer, 5/16"   Hex Cap Screw, 7/16"   Hex Cap Screw, 7/16"   Lock Washer, 7/16"   Hex Cap Screw, 7/16"   Lock Washer, 7/16"   Lock Wa	36	715019	1	Cone Pt. Setscrew, Hollow Hd.,
38				,
39	37	166027	1	Shift Fork
40	38	154323	1	Spring
41	39	154262	1	Shift Lock Ball
42	40	166164	1	Shift Shaft Assembly
43	41	166023	1	"O" Ring
44 166162 1 Lift Lever Latch 45 726002 1 Pipe Plug, 1/4" 46 726003 2 Pipe Plug, 3/8" 47 728501 1 Street Elbow, 3/8" 48 705007 5 Hex Cap Screw, 5/16"-18 x 1' 49 705020 4 Hex Cap Screw, 5/16"-18 x 2' 50 720001 9 Lock Washer, 5/16" 51 166097 1 Hydrostatic Pump & Motor Unit 52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4' 58 720006 2 Lock Washer, 7/16"	42	166029	1	Shift Stem
45	43	717029	1	Hex Jam Nut, 5/16"-24
46         726003         2         Pipe Plug, 3/8"           47         728501         1         Street Elbow, 3/8"           48         705007         5         Hex Cap Screw, 5/16"-18 x 2'           49         705020         4         Hex Cap Screw, 5/16"-18 x 2'           50         720001         9         Lock Washer, 5/16"           51         166097         1         Hydrostatic Pump & Motor           Unit         Washer         5         123144         1         Washer           54         715088         1         Hex Cap Screw, 5/16"-24 x         5/8"           55         720001         1         Lock Washer, 5/16"           56         166026         1         "O" Ring           57         715064         2         Hex Cap Screw, 7/16"-14 x 4'           58         720006         2         Lock Washer, 7/16"	44	166162	1	Lift Lever Latch
47         728501         1         Street Elbow, 3/8"           48         705007         5         Hex Cap Screw, 5/16"-18 x 1'           49         705020         4         Hex Cap Screw, 5/16"-18 x 2'           50         720001         9         Lock Washer, 5/16"           51         166097         1         Hydrostatic Pump & Motor           Unit         Washer         5         123144         1         Washer           54         715088         1         Hex Cap Screw, 5/16"-24 x         5/8"           55         720001         1         Lock Washer, 5/16"           56         166026         1         "O" Ring           57         715064         2         Hex Cap Screw, 7/16"-14 x 4'           58         720006         2         Lock Washer, 7/16"	45	726002		Pipe Plug, 1/4"
48 705007 5 Hex Cap Screw, 5/16"-18 x 1' 49 705020 4 Hex Cap Screw, 5/16"-18 x 2' 50 720001 9 Lock Washer, 5/16" 51 166097 1 Hydrostatic Pump & Motor Unit 52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4' 58 720006 2 Lock Washer, 7/16"	46	726003	2	. Pipe Flug, 3/8"
49       705020       4       Hex Cap Screw, 5/16"-18 x 2"         50       720001       9       Lock Washer, 5/16"         51       166097       1       Hydrostatic Pump & Motor         Unit       Unit       Washer Finion         53       123144       1       Washer         54       715088       1       Hex Cap Screw, 5/16"-24 x         5/8"       5/8"       Lock Washer, 5/16"         56       166026       1       "O" Ring         57       715064       2       Hex Cap Screw, 7/16"-14 x 4"         58       720006       2       Lock Washer, 7/16"	47	728501		Street Elbow, 3/8"
50 720001 9 Lock Washer, 5/16" 51 166097 1 Hydrostatic Pump & Motor Unit 52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	48	705007	5	Hex Cap Screw, 5/16"-18 x 1"
51 166097 1 Hydrostatic Pump & Motor Unit 52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	49	705020		Hex Cap Screw, 5/16"-18 x 2"
52 166003 1 Motor Shaft Pinion 53 123144 1 Washer 54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	50	720001		
52	51	166097	1	Hydrostatic Pump & Motor
53				Unit
54 715088 1 Hex Cap Screw, 5/16"-24 x 5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	52	166003	1	Motor Shaft Pinion
5/8" 55 720001 1 Lock Washer, 5/16" 56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	53	123144	1	Washer
55	54	715088	1	Hex Cap Screw, 5/16"-24 x
56 166026 1 "O" Ring 57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	j l			5/8"
57 715064 2 Hex Cap Screw, 7/16"-14 x 4" 58 720006 2 Lock Washer, 7/16"	55	720001	1	
58 720006 2 Lock Washer, 7/16"	56	166026		"O" Ring
58 720006 2 Look Washer, 7/16"	57	715064	2	Hex Cap Screw, 7/16"-14 x 4"
		720006		
. , , , ,	59	717022	2	

# BEVEL GEAR HOUSING



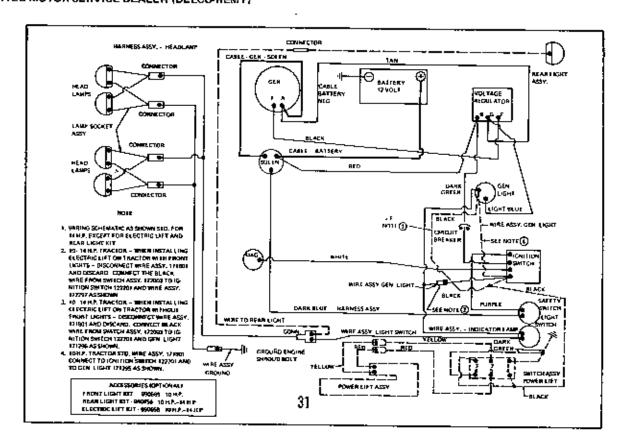
Ref. No.	Part No.	Qty. Req.	Description		Ref. No.	Part No.	Qty. Req.	Description
1	171797	1	Bevel Gear Housing,		23	720001	1	Lock Washer, 5/16"
١ ,	154226	Ι.	w/Bearings		24	705012	1 1	Hex Capscrew, 5/16"-18 x
2.	154326	ļ	Pipe Plug	1			1	5/8"
3	173966	1 1	Driven Shaft		25	172752	1	Bevel Driven Gear
4	154071	1	Washer		26	725003	1	Кеу
5	717517	1	Hex Jam Nut		27	154026	1	Washer
6	171792	Ī	Spacer		28	154281	1	Hex Capscrew, 5/16"-18 x
7	171790	5	Shim (As Required)		İ			3/4"
8	171791	I	Shirn		29	154282	ΙI	Gasket
9	171787	1	Oil Seal		30	164249	1	Housing Cover Assembly
10	172256	1	Ball Bearing	}	31	726002	1	Pipe Plug
11	171796	1	Bevel Driven Gear	- 1	32	728501	1	Street Elbow
12	172206	1	Retaining Ring		33	726003	lī	Pipe Pluq
13	725003	1 1	Key		34	707003	6	Hex Cap Screw, 1/4"-20 x 5/8"
14	154279	1	Needle Bearing		35	166049	ΙĭΙ	R.H. Side Plate
15	118117	1	Oil Seal		36	174034	līl	L.H. Side Plate
16	172750	1	Drive Shaft	- 1	37	720006	14	Lock Washer, 7/16"
17	118117	1	Oil Seal		38	715136	6 1	Hex Cap Screw, 7/16"-14 x 1"
18	154279	1	Needle Bearing	- 1	39	705042	4	Hex Cap Screw, 7/16'-14 x
19	172256	1 1	Ball Bearing		i ''		*	1-1/4"
20	172206	1.	Retaining Ring		40	717022	4	Full Hex Nut, 7/16"-14
21	172753	11	Washer		41	715092	4	Hex Cap Screw, 7/16"-14 x
22	154040	1	Bearing Clamp Plate					1-1/4"

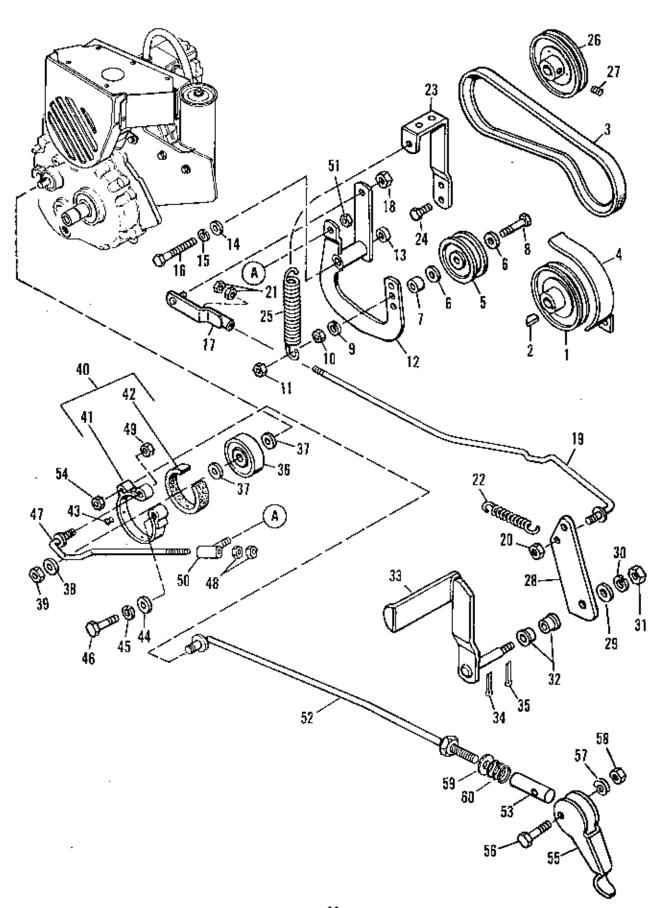
#### **ELECTRIC STARTER-GENERATOR SYSTEM**

Ref.	Part No.	Qty. Req.	Description
, 1	122236**	1	Motor-Generator
2	122213	1	Generator Start Cable
3	157524	1	"V" Belt
4	157654	1	Support Assy.
5	720001	2	Lock Washer, 5/16"
6	705017	2	Hex Cap Screw, 5/16"-18 x 3/4"
7	720001	2	Lock Washer, 5/16"
8	717001	2	Full Hex Nut, 5/16"-18
9	705019	2	Hex Cap Screw, 5/16"-18 x 1-1/4"
10	122193**	1	Voltage Regulator
11	171885	1	Bracket
12	157102	1	Belt Tightener
13	705030	3	Hex Cap Screw, 1/4"-20 x 3/4"
14	720003	3	Lock Washer, 1/4"
15	717005	3	Full Hex Not, 1/4"-20
16	715048	2	Hex Cap Screw, 5/16"-18 x 3/4"
17	719002	1	Plain Washer, 5/16"
18	720001	2	Lock Washer, 5/16"
19	717001	1	Full Hax Nut, 5/16"-18
20	172270	1	Battery
21	172277	1	Film, Battery
22	171805	1	Cable (Battery to Solenoid)
23	122195	1	Wire Clamp (Generator Cable)
24	714005	1	Rd. Hd. Screw 10-24 x 1/2"
25	171811	1	Cable (Battery to Ground)
26	715090	1	Screw Hex Thread Forming, 1/4"-20 x 1/2"

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Ref. No.	Part No.	Qty. Req.	Description
27	122142	1	Battery Insulation
28	172119	1	Fuel Tank Insulation
29	122201	1	Starter Switch w/Keys
30	721509	1	Lock Washer Int., 9/16"
31	174698	1 .	Harness Assembly
32	172175	1 .	Grommet
33	106786	1	Clamp
34	165074	1	Speed Clip
35	165073	1	Speed Clip
36	122233	2	Safety Switch
37	122234	1	Nut
38	166174	1	Switch Support
39	705017	1	Hex Cap Screw, 5/16"-18 x
			3/4"
<b>. 40</b>	720001	1	Lock Washer, 5/16"
41	717001	1	Full Hex Nut, 5/16"-18
42	122216	1 1	Solenoid
43	715090	2	Scrow Hex Thread Forming,
	]		1/4"-20 x 1/2"
44	717007	1	Full Hex Nut, 10-32
45	721003	1	Lock Washer, ext. No. 10
46	717001	-2	Full Hex Nut, 5/16"-18
47	720001	2	Lock Washer, 5/16"
48	720003	2	Lock Washer, 1/4"
49	717005	2	Full Hex Nut, 1/4"-20
50	1712 <b>9</b> 5	1	Indicator Lamp Assy.
51	171801	1	Wire Ignition to Gen. Light
52	172163	1	Circuit Breaker
53	171225	1	Battery Clamp
54	717525	1	Grommet

<sup>\*\*</sup> FOR SERVICE CONTACT YOUR LOCAL UNITED MOTOR SERVICE DEALER (DELCO-REMY)



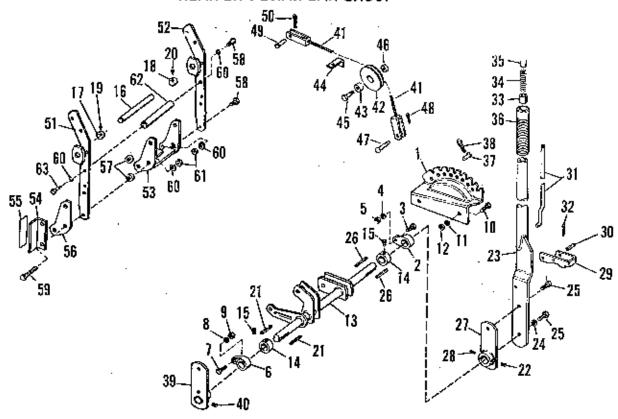


# CLUTCH AND BRAKE GROUP

Ref. No.	Part No.	Qty. Req.	Description
1	157121	1	Driver Pulley
2	725003	1 1	Woodruff Key, 3/16" x 3/4"
3	166172	1 .	"V" Belt
4	166122	1 1	Belt Guard Assy.
5	164268	l 1	Idler Pulley
6	719001	2	Plain Washer, 3/8"
7	157081	1	Spacer
8	705003	1	Hex Cap Screw, 3/8"-16 x 2-1/4"
ا و ا	720002	l ı	Lock Washer, 3/8"
10	717003	ī	Full Hex Nut, 3/8"-16
11	717524	Ī	Jam Hex Lock Nut, 3/8"-16
12	166126	l i	Idler Lever Assy.
13	166130	l i l	Spacer
14	719001	lī	Plain Washer, 3/8"
15	720002	li	Lock Washer, 3/8"
16	715063	1	Hex Cap Screw, 7/16"-14 x 3-3/4"
17	166157	lı!	Rod Guide Assembly
18	717511	l	Full Hex Lock Nut, 5/16"- 18
.9	174104	lı	Clutch Rod Assy.
20	717511	ı	Hex Nut, Full, Lock, 5/16"-
21	717001	2	Full Hex Nut, 5/16"-18
22	121037	l ī	Front Tension Spring
23	166156	1	Spring Bracket, 1/4" x 1 x 11·1/4"
24	714027	2	Hex Hd. Cap Screw, 3/8" x 3/4"
25	154369	1	Idler Pulley Spring
26	166173	lί	Driven Pulley
27	713503	ı	Cup Pt. Socket Hd. Set Screw, 5/16"-18 x 5/16"
28	157300	1	Foot Pedal Arm, 1/4" x 1-3/4" x 5-7/8"

Ref.		Qty.	
No.	Pårt No.	Req.	Description
- 20	710001	<del>-</del>	TM : Id b
29 30	719001	1	Plain Washer, 3/8"
	720002	1	Lock Washer, 3/8"
31	717003	1	Full Hex Nut, 3/8"-16
32 33	108419	2	Bushing
33 34	171178	_	Foot Pedal Assy.
	722001	1	Cotter Pin, 3/32" x 3/4"
35	722009	1	Cotter Pin, 1/8" x 3/4"
36	166176	1	Brake Drum
37	158196	2	Washer
38	719001	1	Plain Washer, 3/8"
39	717519	1	Lock Nut, 7/16"-14
40	172234	1	Brake Band & Lining Assy.
41	172236	1	Brake Band
42	172237	1	Brake Lining
43	724502	5	Rivet No. 7 x 1/4"
44	719002	1	Plain Washer, 5/16"
45	720002	1	Lock Washer, 3/8"
46	705010	1	Hex Cap Screw, 3/8"-16 x
l		_	1-3/4"
47	172460	1	Brake Rod Assy.
48	717003	2	Full Hex. Nut, 3/8"-16
49	717505	1	Full Hex Lock Nut, 3/8"-16
50	166119	1	Rod Guide Assy.
51	717511	1	Full Hex Lock Nut, 5/16"-18
			N.C.
52	172461	1	Parking Brake Rod Assy.
53	171994	1	Rod End
54	717001	1	Fuli Hex Nut, 5/16"-18
55	172108	1	Parking Brake Lever
56	715062	1	Hex Cap Screw, 1/4"-20
	ļ		x 1-1/4" Grade 8
57	721702	1	Double Lock Washer, 1/4"
58	717509	1	Hex Nut, Full, Lock 1/4"-20
59	719004	1	Plain Washer, 1/2"
60	121037	1	Spring
			_
			•

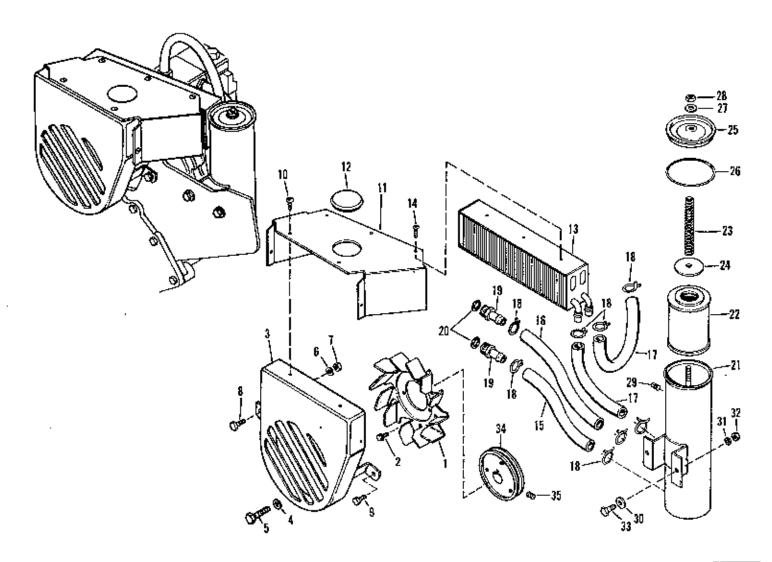
## REAR LIFT DRAW BAR GROUP



			<del>,</del> ,
Ref.	N . 17	Qty.	
No.	Part No.	Req.	Description
1	171599	1	Lift Lever Quadrant
2	170975	1	Lift Lever Bearing
3	715046	1	Hex Cap Screw, 5/16"-18 x
1	l .	l '	1-1/4"
4	720001	1	Lock Washer, 5/16"
5	717001	1	Full Hex Nut, 5/16"
6	170795	1	Lift Lever Bearing
7	715046	1	Hex Cap Screw, 5/16"-18 x
			1-1/4"
8	720001	1	Lock Washer, 5/16"
9	717001	1	Hex Nut, 5/16"-18
10	705004	2	Hex Cap Screw, 3/8"-16 x
			3/4"
11	720002	2	Lock Washer, 3/8"
12	717003	2	Full Hex Nut, 3/8"
13	174111	1	Lift Shaft Assy.
14	157624	2	Set Collar
15	713002	2	Set Screw Sq. Hd., 5/16"-18
l			x 3/8"
16	154216	1	Lift Shaft
17	8021010	1	Set Collar
18	157695	-1	Set Collar
19	713002	ŀ	Set Screw, 5/16"-18 x 3/8"
20	713010	1	Set Screw
21	157652	2	Key
22	713502	1	Set Screw, 5/16"-18 x 1/4"
23 24	171589	1	Lift Lever Assy,
25	720002	1 2	Lock Washer, 3/8"
26	715120 157120	2	Hex Cap Screw, 3/8"-16 x 1"
26	157120 171593	1	Key
28	713502	1	Lift Lever Assy. Inner Section
29	173039	1	Set Screw, 5/16"-18 x 1/4" Lift Lever Latch
30	723018	ì	Roll Pin, 3/8" x 1-1/4"
31	170983	1	Latch Rod
31	110300		Laten Rog

Ref. No.	Part No.	Qty. Req.	Description
32	722001	1	Cotter Pin, 3/32" x 3/4"
33	154226	1	Spacer
34	152006	1	Spring
35	154227	1	Thumb Button
36	156209	1	Handle Grip
37	153058	.1	Pin
38	8161045	ð.	Spring Clip
39	157625	i	Front Lift Lever Assy.
40	713502	1	Set Screw, 5/16"-18 x 1/4"
41	174085	1	Cable Assy., Lift
42	172725	1	Pulley
43	157081	1	Spacer
44	174723	1	Cable Guard
45	108418	1	Screw
46	717524	1	Hex Jam Lock Nut, 3/8"-16
47	174215	1	Pin
48	722005	1	Cotter Pin, 3/32" x 7/8"
49	153058	1	Pin
50	8161045	1	Spring Clip
51	166206	1	Arm Assy.
52	166072	1	Arm Assy.
53	166074	1	Draw Bar Assy.
54	166198	1	Plate, Decal
<b>\$</b> 5	166197	1	Film, Safety
56	166075	1	Draw Plate
57	166076	2	Spacer
58	705042	3	Hex Cap Screw, 7/16"-14 x
			1-1/4"
59	705069	2	Hex Cap Screw, 7/16"-14 x
			2-1/2"
60	720006	6	Lock Washer, 7/16"
61	717022	4	Full Hex Nut, 7/16"
62	166110	1	Spacer
63	705047	1	Hex Cap Screw, 7/16"-14 x 1-3/4"

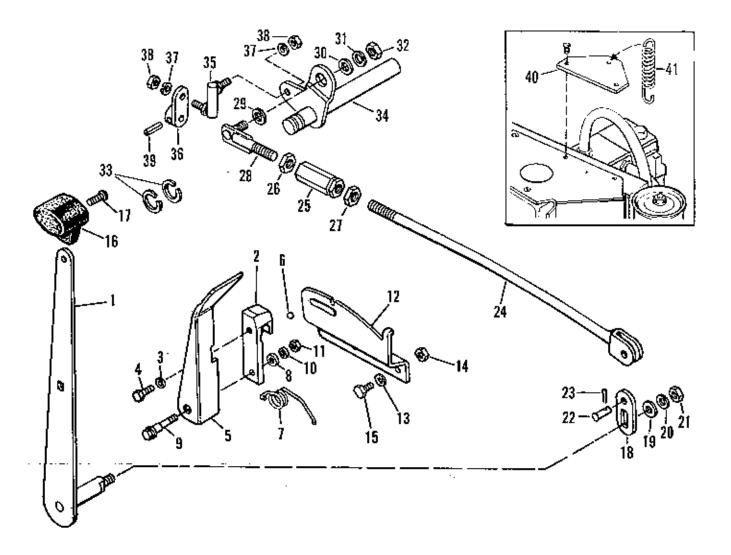
## HYDROSTATIC COOLING GROUP



Ref. No.	Part No.	Qty. Req.	Description
1	166022	1	Pulley Fan
2	715090	3	Hex Screw, Washer Hd.
3	166114	1	Fan Shroud Assy.
4	720002	1	Lock Washer
5	705031	1	Hex Cap Screw, 3/8"-16 x 2"
6	720001		Lock Washer, 5/16"
7	717001	1	Full Hex Nut, 5/16"
8	705017	1	Hex Capscrew, 5/16"-18 x 3/4"
9	714026	1	Hex Screw, Thd.
10	714004	4	Self Tapping Screw, No. 10
	]	1	x 3/8"
11	166134	1	Cooler Deflector
12	166165	1	Caplug
13	166135	1	Oil Cooler
14	710002	3	Rd. Hd. Mach. Screw, No. 10
		•	32 x 1/2"
', ·	166136	1	Hydraulic Hose
, .ó	166137	1 1	Hydraulic Hose
17	166138	2	Hydraulic Hose
L	<u> </u>	!	

Ref. No.	Part No.	Qty. Req.	Description
No.  18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	166044 166139 166024 166140 166147 166150 166080 166020 166161 717525 726253 719002 720001 717001	8 2 2 1 1 1 1 1 1 1 1 2 2 2 2 2	Hose Clamp Beaded Insert "O" Ring Reservoir Assy. Filter Element Spring Washer Reservoir Cover "O" Ring Nylon Washer Elastic Stop Nut Pipe Plug, 1/4" Plain Washer, 5/16" Lock Washer, 5/16" Full Hex Nut, 5/16"-18"
33 34 35	705017 166173 713503	2 1 1	Hex Capscrew, 5/16"-18 x 3/4" Driven Pulley Cup Pt. Socket Hd. Set Screw, 5/16"-18 x 5/16"

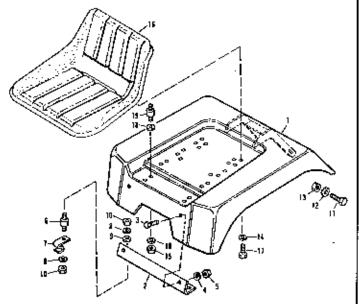
## HYDROSTATIC CONTROL GROUP



Ref. No.	Part No.	Qty. Req.	Description
1	171072	1 .	Lever Assembly
2	171432	1	Stop Clamp
3	720003	1	Lock Washer, 1/4" Std.
4	705002	1	Hex Capscrew, 1/4"-20 N.C.
			x 1/2"
5	171779	1	Handle
6	166178	1	Shift Ball Handle, 5/16"
7	166047	1	Spring
8	166063	1	Spacer
9	166051	1	Shoulder Bolt
10	719006	1	Plain Washer, 1/4"
11	717513	1	Full Hex Lock Nut, 1/4"-20
12	171429	1	Quadrant
13	721001	. 2	Shakeproof Lock Washer, 5/16"
14	172123	1	Twin Pilot Nut
15	172157	2	Special Screw
16	171165	1	Handle
17	714012	1	Screw, Thd. Form., 1/4"-20
			x 7/8"
18	164123	1	Link
19	719001	1	Plain Washer, 3/8"
20	720002	l	Lock Washer, 3/8"

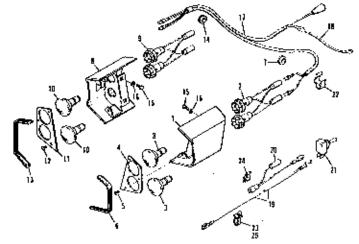
Ref. No.	Part No.	Qty. Req.	Description
	Part No. 717003 153058 722001 171385 166088 718046 717022 166089 166078 719002 720001 717003 158596 166095 166079	Req.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Description  Full Hex Nut, 3/8"-16 Pin Cotter Pin, 3/32" x 3/4" Rod Assy., Control, Front Turn Buckle Full Hex Nut, 7/16"-14 L.H. Full Hex Nut, 7/16"-14 R.H. Rod Assy., Rear Control Spacer Plain Washer, 5/16" Lock Washer, 5/16" Full Hex Nut, 3/8"-16 Retaining Ring Shaft Assy. Control Ball Joint, Double End
36 37 38 39 40 41	166092 720001 717002 723008 166160 107135	1 2 2 1 1	Link Assy. Control Lock Washer, 5/16" Full Hex Nut, 5/16"-24 Roll Pin, 1/4" x 1-1/4" Spring Clip Spring

## **SEAT AND FENDERS**



Ref. No.	Part No.	Qty. Req.	Description
1	166111	1	Seat Deck Assy.
2	164029	ı	Seat Deck Bracket, Front
3	705012	2	Hex Head Cap Screw, 5/16'-
Ι.		l	18 x 5/8"
4	720001	2	Lock Washer, 5/16"
5	717001	2	Hex Nut, Full, 5/16"-18
6	157094	2	Cushion Connector, Front
7	1606823	2	Spring Clip
8	720001	4	Lock Washer, 5/16"
9	719006	2	Washer
10	717001	4	Hex Nut, Full, 5/16"-18
11	705016	2	Hex Head Capscrew, 3/8"-16 x 1-1/4"
12	721601	2	Lock Washer
13	717510	2	Hex Lock Nut, Full, 3/8"-16
14	720001	4	Lock Washer, 5/16"
15	717001	4	Hex Nut, Full, 5/16"-18
16	171153	1	Contour Seat Assembly
17	705012	2	Hex Head Capscrew, 5/16"-
	l		18 x 5/8"
18	720001	4	Lock Washer, 5/16"
19	159085	2	Cushion Connector
	<u> </u>		'.

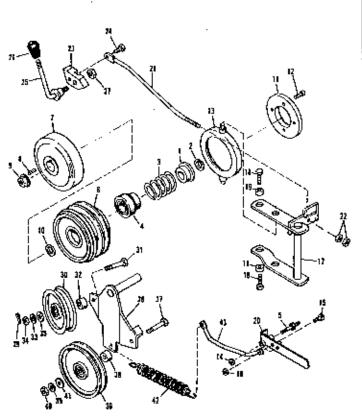
# FRONT LIGHT GROUP



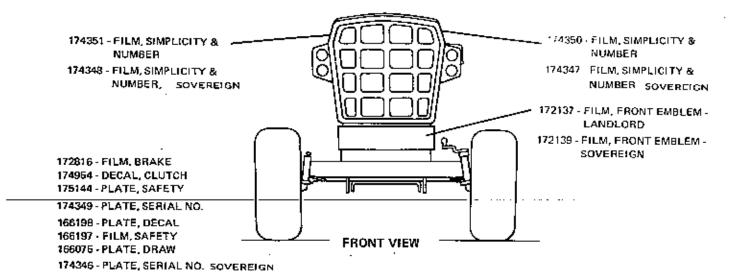
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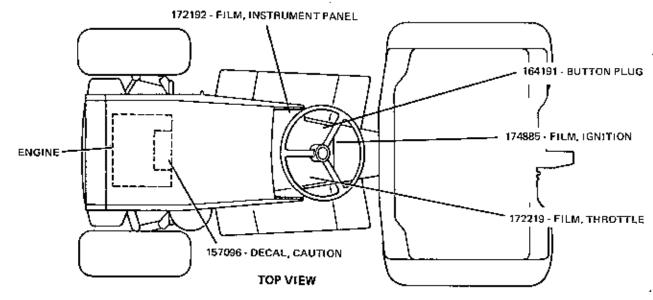
Ref. No.	Part No.	Qty. Req.	Description
1 2 3 4	172286 172290 172048 172243	1 2	Shroud & Plate Assy. L.H. Lamp Socket & Wire Assy. Headlight
5	714019	3	Plate, Front Screw, Round Head Phillips Swageform No. 12-24 x 1/2"
6 7	172269 172176	1	Moulding Grommet
8 9	172285 172290	) 1	Shroud & Plate Assy. R.H. Lamp Socket & Wire Assy.
10	172048 172243	2	Headlight Plate, Front
1 12	714019	3	Screw, Round Head, Phillips Swageform No. 12-24 x 1/2"
13 14	172269 172176	1 -	Moulding Grommet

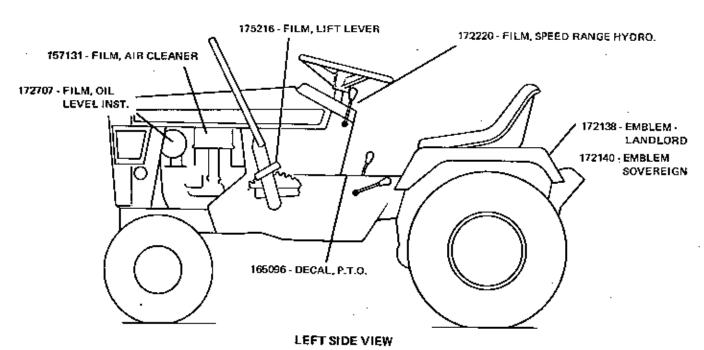
Ref, No.	Part No.	Qty. Req.	Description:
15	705002	4	Hex Cap Screw, 1/4"-20 N.C. x 1/2"
16	720003	4	Lock Washer, 1/4" Std.
17	172294	1	Harness Assy.
18	172295	1	Wire Assy., Ground
19	172296	1	Wire Assy., Light Switch
20	172297	1	Wire Assy., Indicator Lamp
21	122184	1	Switch, Toggle
22	172436	2	Cable Clip Tinnerman, Front
23	172434	1	Frame Cable Clip Tinnerman, Rear Frame
24	172433	1	Cable Clip Tinnerman, Top of Grille
25	172434	1	Cable Clip Tinnerman



Ref. No.	Part No.	Qty. Req.	Description
1	173965	1	Inner Spring Guide
2	172206	ı	Ring, Retaining
3	171772	1	Spring
4	174859	1	Bushing Assembly
5	157273	1	Stud
6	173956	1	Pulley
7	174862	1	Clutch Plate Assy.
8	8061081	1	Key
9	175289	1	Washer Base Lock Nuts
10	172206	1	Ring, Retaining
11	173957	1	Brake Disc
12	715162	4	Socket Hd. Screw, 1/4"-20 x 5/8"
13	174013	1	Support Brake Assy.
14	717519	1	Hex Lock Nut, Full, 7/16"-14
15	705017	1	Hex Cap Screw, 5/16" 18 x 3/4"
16	717511	1	Hex Lock Nut, Full, 5/16"-18
17	174451	ī	Pivot Assy.
18	715165	2	Thread Forming Screw,
	111100	-	5/16" x 18 x 1" lg.
19	171371	2	Bushing
20	164155	ī	Handle Assy.
21	173988	Ιi	Control Rod
22	717001	. 2	Hex Nut Full, 5/16"-18
23	173991	Ιĭ	Lever
24	174686	Ιī	Special Cap Screw, 5/16"-
, ,,		l .	UNC-2A x 7/8" Grade 5
25	174664	1	Handle, Clutch PTO
26	172038	1	Knob
27	717510	1	Hex Lock Nut, Full, 3/8"-16
28	174455	1	Pivot Arm Assy.
29	722007	1	Cotter Pin, 3/16" x 1-1/2"
30	105306	1	Pulley
31	705006	1	Hex Cap Screw, 3/8"-16 x 2"
32	172329	1	Spacer
33	720002	1	Lock Washer, 3/8"
34	717003	i	Hex Nut, Full, 3/8"-16
35	719002	1	Plain Washer, 5/16"
36	173982	1	Idler Pulley
37	705006	1	Hex Cap Screw, 3/8"-16 x 2"
38	172329	1	Spacer
39	720002	1 .	Lock Washer, 3/8"
40	717003	1	Hex Nut, Full, 3/8"-16
41	719002	1	Plain Washer, 5/16"
42	157262	1	Spring Tension
43	164047	1	Spring Tension Rod
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